

SECTION B. DETAILED STATISTICAL TABLES

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Table 1. Federal personnel with bachelor's degrees or higher, by highest degree field and science and engineering (S&E) employment status: 1998-2002

Highest degree field	1998			1999			2000		
	Total employed	Employed in S&E occupations	Employed outside S&E occupations	Total employed	Employed in S&E occupations	Employed outside S&E occupations	Total employed	Employed in S&E occupations	Employed outside S&E occupations
All fields	805,417	189,713	615,704	794,817	186,891	607,926	799,894	187,396	612,498
Science and engineering	413,895	155,740	258,155	405,833	152,484	253,349	404,458	151,888	252,570
Computer and mathematical sciences	46,903	20,838	26,065	45,746	20,309	25,437	45,169	20,042	25,127
Life sciences	31,245	14,730	16,515	30,816	14,565	16,251	30,924	14,663	16,261
Physical sciences	70,392	24,434	45,958	69,912	24,412	45,500	70,963	24,861	46,102
Social sciences	99,474	18,356	81,118	97,763	18,089	79,674	97,967	18,353	79,614
Engineering	165,881	77,382	88,499	161,596	75,109	86,487	159,435	73,969	85,466
Non-S&E	390,989	33,852	357,137	388,282	34,269	354,013	394,895	35,397	359,498
No report	533	121	412	702	138	564	541	111	430

Table 1. Federal personnel with bachelor's degrees or higher, by highest degree field and science and engineering (S&E) employment status: 1998-2002

Highest degree field	2001			2002		
	Total employed	Employed in S&E occupations	Employed outside S&E occupations	Total employed	Employed in S&E occupations	Employed outside S&E occupations
All fields	818,153	193,448	624,705	850,078	206,182	643,896
Science and engineering	410,503	155,015	255,488	424,040	162,220	261,820
Computer and mathematical sciences	44,958	19,988	24,970	45,199	20,166	25,033
Life sciences	32,377	15,728	16,649	36,195	18,602	17,593
Physical sciences	73,177	25,749	47,428	76,783	27,210	49,573
Social sciences	99,469	19,148	80,321	102,099	20,320	81,779
Engineering	160,522	74,402	86,120	163,764	75,922	87,842
Non-S&E	406,432	38,036	368,396	424,181	43,554	380,627
No report	1,218	397	821	1,857	408	1,449

KEY: S&E = Science and engineering

SOURCE: National Science Foundation tabulations from Office of Personnel Management's Central Personnel Data Files.

Table 2. Federal scientists and engineers, by agency: 1998-2002

Agency	1998	1999	2000	2001	2002
All agencies	189,713	186,891	187,396	193,448	206,182
Department of Agriculture	17,555	16,958	17,110	17,729	19,056
Department of Commerce	9,833	9,442	9,520	9,854	10,684
Department of Defense	85,063	82,678	81,529	83,294	89,409
Department of the Air Force	15,842	15,095	14,769	14,799	15,777
Department of the Army	29,322	28,520	28,195	28,962	30,293
Department of the Navy	34,695	34,133	33,491	34,320	37,609
Other Defense Agencies	5,204	4,930	5,074	5,213	5,730
Department of Energy	5,192	5,057	4,934	5,059	5,037
Department of Health and Human Services	8,872	9,376	9,744	10,228	10,916
Department of Housing and Urban Development	304	297	280	287	310
Department of the Interior	12,209	12,523	12,860	13,425	14,315
Department of Justice	4,151	4,256	4,452	4,617	5,019
Department of Labor	2,117	2,101	2,207	2,282	2,327
Department of State	3,522	4,329	4,247	4,636	4,961
Department of Transportation	5,508	5,420	5,498	5,839	6,169
Department of the Treasury	3,432	3,486	3,436	3,604	4,128
Department of Veterans Affairs	5,082	5,375	5,544	5,947	6,471
Environmental Protection Agency	8,858	8,768	8,675	8,587	8,598
General Services Administration	734	718	728	711	793
National Aeronautics and Space Administration	10,702	10,542	10,755	10,862	10,863
National Science Foundation	303	270	252	392	407
Nuclear Regulatory Commission	1,563	1,527	1,534	1,582	1,699
US International Development Cooperation Agency	261	227	221	196	192
All other agencies	4,452	3,541	3,870	4,317	4,828

SOURCE: National Science Foundation tabulations from Office of Personnel Management's Central Personnel Data Files.

Table 3. Federal scientists and engineers, by primary work activity: 1998-2002

Primary work activity	1998	1999	2000	2001	2002
All activities	189,713	186,891	187,396	193,448	206,182
Clinical practice, counseling, and ancillary medical services	3,991	4,320	4,487	4,505	4,511
Construction	4,167	3,884	3,840	3,877	3,917
Data collection, processing, and analysis	14,159	13,202	13,328	13,700	13,905
Design	11,447	10,516	10,663	10,639	10,859
Development	26,822	25,960	25,818	26,223	26,949
Installations, operations, and maintenance	9,288	8,701	8,746	8,771	9,110
Management	11,018	10,647	10,619	10,658	10,551
Natural resource operations	13,645	13,768	14,004	14,502	15,319
Planning	5,847	4,949	4,858	4,688	4,630
Production	3,920	3,477	3,372	3,226	2,966
Regulatory enforcement and licensing	6,069	5,920	5,941	5,910	6,329
Research	21,380	21,411	21,704	21,964	20,873
Research contract and grant administration	1,053	1,016	960	1,042	1,051
Scientific and technical information	2,951	2,965	3,245	3,454	3,675
Standards and specifications	1,195	1,206	1,183	1,080	1,186
Teaching and training	369	356	377	373	377
Technical assistance and consulting	4,575	4,488	4,460	4,537	4,381
Test and evaluation	8,495	8,051	8,292	8,443	9,053
Other, not elsewhere classified	10,489	11,152	11,844	12,819	15,580
Activity unknown	28,833	30,902	29,655	33,037	40,960

SOURCE: National Science Foundation tabulations from Office of Personnel Management's Central Personnel Data Files.

Table 4. Federal scientists and engineers, by occupational group and series and by sex: 1998-2002

Occupational group and OPM series ¹	1998	1999	2000	2001	2002
All occupations	189,713	186,891	187,396	193,448	206,182
Female	38,257	38,571	39,788	42,508	47,216
Male	151,456	148,320	147,608	150,936	158,962
No report	0	0	0	4	4
All scientists	103,483	103,301	104,790	110,291	120,824
Female	29,392	29,886	31,016	33,420	37,497
Male	74,091	73,415	73,774	76,870	83,326
No report	0	0	0	1	1
Computer and mathematical sciences	28,073	27,963	28,339	31,525	39,223
Female	8,863	8,906	9,182	10,263	12,940
Male	19,210	19,057	19,157	21,261	26,282
No report	0	0	0	1	1
Computer scientists	3,182	3,287	3,369	3,861	4,306
Female	987	1,017	1,018	1,148	1,266
Male	2,195	2,270	2,351	2,712	3,040
No report	0	0	0	1	0
Computer specialists	15,788	16,054	16,407	19,163	26,314
Female	5,289	5,419	5,626	6,543	9,042
Male	10,499	10,635	10,781	12,620	17,272
No report	0	0	0	0	0
Cryptography analysts	9	12	12	11	8
Female	6	9	9	8	5
Male	3	3	3	3	3
No report	0	0	0	0	0
Equipment specialties	1,018	914	893	817	826
Female	111	97	103	95	90
Male	907	817	790	722	736
No report	0	0	0	0	0
Mathematical statisticians	1,140	1,155	1,154	1,144	1,158
Female	366	395	397	403	411
Male	774	760	757	741	747
No report	0	0	0	0	0
Mathematicians	1,407	1,320	1,250	1,126	1,100
Female	421	395	381	347	347
Male	986	925	869	779	753
No report	0	0	0	0	0

Table 4. Federal scientists and engineers, by occupational group and series and by sex: 1998-2002

Occupational group and OPM series	1998	1999	2000	2001	2002
Operations research analysts	3,137	3,067	3,010	3,041	3,075
Female	749	746	758	771	773
Male	2,388	2,321	2,252	2,270	2,301
No report	0	0	0	0	1
Statisticians	2,392	2,154	2,244	2,362	2,436
Female	934	828	890	948	1,006
Male	1,458	1,326	1,354	1,414	1,430
No report	0	0	0	0	0
Life scientists	28,600	28,847	29,525	30,699	32,405
Female	7,956	8,196	8,542	9,142	9,851
Male	20,644	20,651	20,983	21,557	22,554
No report	0	0	0	0	0
Agricultural extension specialists	9	7	5	4	2
Female	5	3	3	3	1
Male	4	4	2	1	1
No report	0	0	0	0	0
Agronomers	271	271	275	274	260
Female	25	25	27	25	22
Male	246	246	248	249	238
No report	0	0	0	0	0
Animal scientists	93	91	92	92	92
Female	16	13	15	17	17
Male	77	78	77	75	75
No report	0	0	0	0	0
Botanists	270	273	277	294	325
Female	132	137	135	149	167
Male	138	136	142	145	158
No report	0	0	0	0	0
Ecologists	788	774	796	879	979
Female	227	227	238	278	313
Male	561	547	558	601	666
No report	0	0	0	0	0
Entomologists	587	552	547	556	565
Female	84	71	79	88	92
Male	503	481	468	468	473
No report	0	0	0	0	0

Table 4. Federal scientists and engineers, by occupational group and series and by sex: 1998-2002

Occupational group and OPM series	1998	1999	2000	2001	2002
Environmental protection specialists	3,679	3,625	3,644	3,663	3,713
Female	1,479	1,472	1,472	1,515	1,532
Male	2,200	2,153	2,172	2,148	2,181
No report	0	0	0	0	0
Fishery biologists	1,881	1,932	2,005	2,128	2,220
Female	381	394	428	464	483
Male	1,500	1,538	1,577	1,664	1,737
No report	0	0	0	0	0
Geneticists	330	322	334	346	367
Female	72	73	79	83	90
Male	258	249	255	263	277
No report	0	0	0	0	0
Horticulturalists	106	105	100	101	96
Female	34	33	31	33	30
Male	72	72	69	68	66
No report	0	0	0	0	0
Microbiologists	1,941	2,000	2,064	2,117	2,230
Female	801	825	853	887	942
Male	1,140	1,175	1,211	1,230	1,288
No report	0	0	0	0	0
Pharmacologists	385	402	383	380	389
Female	112	118	122	123	127
Male	273	284	261	257	262
No report	0	0	0	0	0
Physiologists	413	410	396	385	359
Female	106	104	97	97	81
Male	307	306	299	288	278
No report	0	0	0	0	0
Plant pathologists	259	240	243	248	249
Female	53	48	50	57	60
Male	206	192	193	191	189
No report	0	0	0	0	0
Plant physiologists	258	230	222	222	216
Female	57	48	49	49	47
Male	201	182	173	173	169
No report	0	0	0	0	0

Table 4. Federal scientists and engineers, by occupational group and series and by sex: 1998-2002

Occupational group and OPM series	1998	1999	2000	2001	2002
Range conservationists	925	909	904	901	942
Female	177	181	174	185	206
Male	748	728	730	716	736
No report	0	0	0	0	0
Soil conservationists	3,731	3,635	3,585	3,611	3,870
Female	605	613	636	666	773
Male	3,126	3,022	2,949	2,945	3,097
No report	0	0	0	0	0
Soil scientists	1,312	1,273	1,270	1,300	1,311
Female	148	142	148	159	171
Male	1,164	1,131	1,122	1,141	1,140
No report	0	0	0	0	0
Toxicologists	301	309	320	330	341
Female	94	96	105	107	118
Male	207	213	215	223	223
No report	0	0	0	0	0
Wildlife biologists	1,936	1,897	1,945	2,012	2,124
Female	461	457	502	541	570
Male	1,475	1,440	1,443	1,471	1,554
No report	0	0	0	0	0
Zoologists	91	95	95	98	91
Female	17	18	18	16	13
Male	74	77	77	82	78
No report	0	0	0	0	0
Biological scientists, general	9,034	9,495	10,023	10,758	11,664
Female	2,870	3,098	3,281	3,600	3,996
Male	6,164	6,397	6,742	7,158	7,668
No report	0	0	0	0	0
Physical scientists	23,927	23,639	23,442	23,561	23,851
Female	4,608	4,616	4,665	4,800	5,037
Male	19,319	19,023	18,777	18,761	18,814
No report	0	0	0	0	0
Astronomers and space scientists	465	457	448	449	438
Female	41	42	45	51	50
Male	424	415	403	398	388
No report	0	0	0	0	0

Table 4. Federal scientists and engineers, by occupational group and series and by sex: 1998-2002

Occupational group and OPM series	1998	1999	2000	2001	2002
Chemists	5,871	5,685	5,571	5,606	5,683
Female	1,659	1,614	1,609	1,636	1,712
Male	4,212	4,071	3,962	3,970	3,971
No report	0	0	0	0	0
Geodesists	70	65	66	66	66
Female	14	15	13	14	13
Male	56	50	53	52	53
No report	0	0	0	0	0
Geologists	1,674	1,666	1,655	1,689	1,700
Female	306	303	302	315	316
Male	1,368	1,363	1,353	1,374	1,384
No report	0	0	0	0	0
Geophysicists	404	405	411	410	412
Female	38	40	41	42	51
Male	366	365	370	368	361
No report	0	0	0	0	0
Health physicists	659	648	650	644	644
Female	128	132	132	132	136
Male	531	516	518	512	508
No report	0	0	0	0	0
Hydrologists	2,382	2,361	2,370	2,384	2,426
Female	402	410	431	453	477
Male	1,980	1,951	1,939	1,931	1,949
No report	0	0	0	0	0
Meteorologists	2,741	2,791	2,782	2,723	2,727
Female	231	232	238	239	245
Male	2,510	2,559	2,544	2,484	2,482
No report	0	0	0	0	0
Oceanographers	646	642	621	610	628
Female	119	116	119	130	147
Male	527	526	502	480	481
No report	0	0	0	0	0
Physicists	2,788	2,659	2,598	2,565	2,580
Female	201	203	196	203	212
Male	2,587	2,456	2,402	2,362	2,368
No report	0	0	0	0	0

Table 4. Federal scientists and engineers, by occupational group and series and by sex: 1998-2002

Occupational group and OPM series	1998	1999	2000	2001	2002
Physical scientists, general	6,227	6,260	6,270	6,415	6,547
Female	1,469	1,509	1,539	1,585	1,678
Male	4,758	4,751	4,731	4,830	4,869
No report	0	0	0	0	0
Social scientists	22,883	22,852	23,484	24,506	25,345
Female	7,965	8,168	8,627	9,215	9,669
Male	14,918	14,684	14,857	15,291	15,676
No report	0	0	0	0	0
Agricultural market analysts	131	123	120	120	117
Female	22	21	20	21	22
Male	109	102	100	99	95
No report	0	0	0	0	0
Agricultural market specialists	383	360	354	337	367
Female	117	119	122	112	119
Male	266	241	232	225	248
No report	0	0	0	0	0
Anthropologists	86	79	77	80	85
Female	37	34	35	32	37
Male	49	45	42	48	48
No report	0	0	0	0	0
Archeologists	814	794	832	904	911
Female	287	281	302	331	332
Male	527	513	530	573	579
No report	0	0	0	0	0
Civil rights analysts	41	39	43	44	40
Female	20	19	26	28	25
Male	21	20	17	16	15
No report	0	0	0	0	0
Economists	5,004	4,482	4,426	4,508	4,496
Female	1,326	1,186	1,203	1,266	1,296
Male	3,678	3,296	3,223	3,242	3,200
No report	0	0	0	0	0
Education research analysts	52	57	59	57	62
Female	26	32	33	30	34
Male	26	25	26	27	28
No report	0	0	0	0	0

Table 4. Federal scientists and engineers, by occupational group and series and by sex: 1998-2002

Occupational group and OPM series	1998	1999	2000	2001	2002
Foreign affairs analysts	3,190	3,563	3,542	3,873	4,192
Female	1,011	1,137	1,188	1,299	1,437
Male	2,179	2,426	2,354	2,574	2,755
No report	0	0	0	0	0
Foreign agricultural affairs analysts	178	168	162	156	153
Female	35	37	38	39	38
Male	143	131	124	117	115
No report	0	0	0	0	0
Geographers	357	320	347	407	467
Female	110	97	107	138	153
Male	247	223	240	269	314
No report	0	0	0	0	0
Intelligence specialists	3,140	3,244	3,359	3,441	3,656
Female	956	1,007	1,021	1,054	1,166
Male	2,184	2,237	2,338	2,387	2,490
No report	0	0	0	0	0
International cooperation specialists	20	14	13	13	19
Female	9	8	7	6	10
Male	11	6	6	7	9
No report	0	0	0	0	0
International relations specialists	132	139	154	174	192
Female	38	43	42	61	67
Male	94	96	112	113	125
No report	0	0	0	0	0
Manpower research analysts	27	26	24	35	33
Female	14	14	10	19	20
Male	13	12	14	16	13
No report	0	0	0	0	0
Psychologists	3,370	3,538	3,610	3,683	3,725
Female	1,151	1,321	1,384	1,488	1,514
Male	2,219	2,217	2,226	2,195	2,211
No report	0	0	0	0	0
Sociologists	39	36	37	36	32
Female	17	15	16	17	15
Male	22	21	21	19	17
No report	0	0	0	0	0

Table 4. Federal scientists and engineers, by occupational group and series and by sex: 1998-2002

Occupational group and OPM series	1998	1999	2000	2001	2002
Trade specialists	628	599	618	657	657
Female	244	239	246	265	264
Male	384	360	372	392	393
No report	0	0	0	0	0
Transportation industry analysts	69	74	74	86	91
Female	18	21	21	27	26
Male	51	53	53	59	65
No report	0	0	0	0	0
Unemployment insurance specialists	93	90	82	78	78
Female	33	32	27	29	31
Male	60	58	55	49	47
No report	0	0	0	0	0
Social scientists, general	5,129	5,107	5,551	5,817	5,972
Female	2,494	2,505	2,779	2,953	3,063
Male	2,635	2,602	2,772	2,864	2,909
No report	0	0	0	0	0
All engineers	86,230	83,590	82,606	83,157	85,358
Female	8,865	8,685	8,772	9,088	9,719
Male	77,365	74,905	73,834	74,066	75,636
No report	0	0	0	3	3
Aerospace engineers	7,578	7,451	7,519	7,734	8,025
Female	794	782	824	917	991
Male	6,784	6,669	6,695	6,817	7,034
No report	0	0	0	0	0
Chemical engineers	1,019	1,015	983	980	1,012
Female	198	201	192	201	216
Male	821	814	791	779	796
No report	0	0	0	0	0
Civil engineers	11,058	10,650	10,418	10,512	10,668
Female	1,097	1,088	1,072	1,132	1,229
Male	9,961	9,562	9,346	9,380	9,439
No report	0	0	0	0	0
Electrical, electronics, & computer engineers	27,449	26,430	25,771	25,953	26,703
Female	2,531	2,421	2,372	2,463	2,635
Male	24,918	24,009	23,399	23,487	24,065
No report	0	0	0	3	3

Table 4. Federal scientists and engineers, by occupational group and series and by sex: 1998-2002

Occupational group and OPM series	1998	1999	2000	2001	2002
Computer engineers	2,319	2,268	2,330	3,144	3,389
Female	434	425	437	571	601
Male	1,885	1,843	1,893	2,573	2,788
No report	0	0	0	0	0
Electrical engineers	3,527	3,431	3,322	3,308	3,476
Female	321	297	284	277	316
Male	3,206	3,134	3,038	3,030	3,159
No report	0	0	0	1	1
Electronics engineers	21,603	20,731	20,119	19,501	19,838
Female	1,776	1,699	1,651	1,615	1,718
Male	19,827	19,032	18,468	17,884	18,118
No report	0	0	0	2	2
Industrial and related engineers	1,981	1,818	1,695	1,644	1,706
Female	272	258	245	239	259
Male	1,709	1,560	1,450	1,405	1,447
No report	0	0	0	0	0
Fire prevention engineers	144	134	139	140	162
Female	16	14	18	16	18
Male	128	120	121	124	144
No report	0	0	0	0	0
Industrial engineers	1,331	1,193	1,086	1,030	1,077
Female	203	189	174	166	185
Male	1,128	1,004	912	864	892
No report	0	0	0	0	0
Safety engineers	506	491	470	474	467
Female	53	55	53	57	56
Male	453	436	417	417	411
No report	0	0	0	0	0
Mechanical engineers	9,151	8,931	8,696	8,826	9,314
Female	590	577	561	614	661
Male	8,561	8,354	8,135	8,212	8,653
No report	0	0	0	0	0
Other engineers	27,994	27,295	27,524	27,508	27,930
Female	3,383	3,358	3,506	3,522	3,728
Male	24,611	23,937	24,018	23,986	24,202
No report	0	0	0	0	0

Table 4. Federal scientists and engineers, by occupational group and series and by sex: 1998-2002

Occupational group and OPM series	1998	1999	2000	2001	2002
Agricultural engineers	333	335	333	334	352
Female	30	35	36	38	52
Male	303	300	297	296	300
No report	0	0	0	0	0
Biomedical engineers	277	257	260	274	278
Female	70	71	66	68	68
Male	207	186	194	206	210
No report	0	0	0	0	0
Ceramic engineers	50	47	45	44	44
Female	9	8	7	8	9
Male	41	39	38	36	35
No report	0	0	0	0	0
Environmental engineers	5,051	4,819	4,718	4,592	4,545
Female	1,099	1,040	1,038	1,015	1,029
Male	3,952	3,779	3,680	3,577	3,516
No report	0	0	0	0	0
Materials engineers	1070	1045	1057	1057	1,086
Female	161	168	171	160	175
Male	909	877	886	897	911
No report	0	0	0	0	0
Metallurgists	122	112	101	95	93
Female	8	4	4	5	5
Male	114	108	97	90	88
No report	0	0	0	0	0
Mining engineers	236	227	231	223	222
Female	11	11	11	10	10
Male	225	216	220	213	212
No report	0	0	0	0	0
Naval architects	761	744	737	739	767
Female	50	58	62	64	67
Male	711	686	675	675	700
No report	0	0	0	0	0
Nuclear engineers	2,112	2,057	2,076	2,141	2,286
Female	118	123	135	157	203
Male	1,994	1,934	1,941	1,984	2,083
No report	0	0	0	0	0

Table 4. Federal scientists and engineers, by occupational group and series and by sex: 1998-2002

Occupational group and OPM series	1998	1999	2000	2001	2002
Petroleum engineers	319	317	317	310	306
Female	33	32	31	33	36
Male	286	285	286	277	270
No report	0	0	0	0	0
Welding engineers	42	38	40	40	43
Female	1	1	2	2	3
Male	41	37	38	38	40
No report	0	0	0	0	0
Engineers, general	17,621	17,297	17,609	17,659	17,908
Female	1,793	1,807	1,943	1,962	2,071
Male	15,828	15,490	15,666	15,697	15,837
No report	0	0	0	0	0

¹ Occupational groups are categorized by NSF's SESTAT code and within occupational groups OPM series are listed alphabetically.

SOURCE: National Science Foundation tabulations from Office of Personnel Management's Central Personnel Data Files.

Table 5. Federal scientists and engineers, by major occupational group and highest degree: 1998-2002

Major occupational group and highest degree level	1998	1999	2000	2001	2002
All occupations	189,713	186,891	187,396	193,448	206,182
PhD	23,274	23,177	23,502	24,105	24,908
Professional	1,646	1,651	1,658	1,718	1,849
MS/MA	54,322	53,967	54,641	56,439	59,525
BS/BA	110,471	108,096	107,595	111,186	119,900
All scientists	103,483	103,301	104,790	110,291	120,824
PhD	19,550	19,483	19,716	20,232	20,938
Professional	1,203	1,233	1,251	1,324	1,440
MS/MA	30,859	31,101	31,792	33,402	35,938
BS/BA	51,871	51,484	52,031	55,333	62,508
Computer and mathematical scientists	28,073	27,963	28,339	31,525	39,223
PhD	1,530	1,525	1,553	1,636	1,731
Professional	146	152	149	168	203
MS/MA	7,306	7,348	7,516	8,163	9,759
BS/BA	19,091	18,938	19,121	21,558	27,530
Life scientists	28,600	28,847	29,525	30,699	32,405
PhD	6,234	6,405	6,600	6,934	7,318
Professional	373	371	379	390	426
MS/MA	7,472	7,588	7,832	8,169	8,645
BS/BA	14,521	14,483	14,714	15,206	16,016
Physical scientists	23,927	23,639	23,442	23,561	23,851
PhD	7,260	7,136	7,106	7,137	7,258
Professional	193	190	191	188	193
MS/MA	6,804	6,788	6,783	6,863	6,929
BS/BA	9,670	9,525	9,362	9,373	9,471
Social scientists	22,883	22,852	23,484	24,506	25,345
PhD	4,526	4,417	4,457	4,525	4,631
Professional	491	520	532	578	618
MS/MA	9,277	9,377	9,661	10,207	10,605
BS/BA	8,589	8,538	8,834	9,196	9,491
All engineers	86,230	83,590	82,606	83,157	85,358
PhD	3,724	3,694	3,786	3,873	3,970
Professional	443	418	407	394	409
MS/MA	23,463	22,866	22,849	23,037	23,587
BS/BA	58,600	56,612	55,564	55,853	57,392

Table 5. Federal scientists and engineers, by major occupational group and highest degree: 1998-2002

Major occupational group and highest degree level	1998	1999	2000	2001	2002
Aerospace engineers	7,578	7,451	7,519	7,734	8,025
PhD	669	686	718	745	783
Professional	21	26	24	23	26
MS/MA	2,458	2,422	2,456	2,546	2,599
BS/BA	4,430	4,317	4,321	4,420	4,617
Chemical engineers	1,019	1,015	983	980	1,012
PhD	171	160	159	153	158
Professional	9	8	7	6	5
MS/MA	262	262	255	252	252
BS/BA	577	585	562	569	597
Civil engineers	11,058	10,650	10,418	10,512	10,668
PhD	251	251	263	268	279
Professional	53	48	47	42	43
MS/MA	2,584	2,527	2,575	2,578	2,646
BS/BA	8,170	7,824	7,533	7,624	7,700
Electrical, electronics, and computer engineers	27,449	26,430	25,771	25,953	26,703
PhD	877	871	884	885	889
Professional	116	106	104	109	123
MS/MA	6,999	6,714	6,612	6,677	6,814
BS/BA	19,457	18,739	18,171	18,282	18,877
Industrial engineers	1,981	1,818	1,695	1,644	1,706
PhD	28	29	29	32	37
Professional	15	14	14	13	13
MS/MA	528	486	458	461	497
BS/BA	1,410	1,289	1,194	1,138	1,159
Mechanical engineers	9,151	8,931	8,696	8,826	9,314
PhD	346	338	340	347	358
Professional	38	34	30	29	32
MS/MA	1,962	1,893	1,835	1,815	1,900
BS/BA	6,805	6,666	6,491	6,635	7,024
Other engineers	27,994	27,295	27,524	27,508	27,930
PhD	1,382	1,359	1,393	1,443	1,466
Professional	191	182	181	172	167
MS/MA	8,670	8,562	8,658	8,708	8,879
BS/BA	17,751	17,192	17,292	17,185	17,418

KEY: PhD = doctorate

Professional = signifies completion of academic requirements for selected professions such as Dentistry (D.D.S. or D.M.D), Law (LL.B. or J.D.), Medicine (M.D.), Theology (B.D.), Veterinary Medicine (D.V.M.), Chiropody or Podiatry (D.S.C.), etc.

MS/MA = master's degree

BS/BA = bachelor's degree

SOURCE: National Science Foundation tabulations from Office of Personnel Management's Central Personnel Data Files.

Table 6. Federal scientists and engineers, by major occupational group and highest degree field: 1998-2002

Major occupational group and highest degree field	1998	1999	2000	2001	2002
All occupations	189,713	186,891	187,396	193,448	206,182
Computer and mathematical sciences	14,730	14,565	14,663	15,728	18,602
Life sciences	24,434	24,412	24,861	25,749	27,210
Physical sciences	20,838	20,309	20,042	19,988	20,166
Social sciences	18,356	18,089	18,353	19,148	20,320
Engineering	77,382	75,109	73,969	74,402	75,922
Nonscience/nonengineering	33,852	34,269	35,397	38,036	43,554
No report	121	138	111	397	408
All scientists	103,483	103,301	104,790	110,291	120,824
Computer and mathematical sciences	12,368	12,312	12,419	13,427	16,232
Life sciences	24,081	24,052	24,472	25,348	26,711
Physical sciences	17,942	17,567	17,330	17,361	17,658
Social sciences	18,069	17,850	18,114	18,943	20,076
Engineering	4,390	4,412	4,444	4,658	5,167
Nonscience/nonengineering	26,545	26,993	27,928	30,230	34,680
No report	88	115	83	324	300
Computer and mathematical scientists	28,073	27,963	28,339	31,525	39,223
Computer and mathematical sciences	11,618	11,557	11,657	12,654	15,415
Life sciences	908	916	952	1,014	1,307
Physical sciences	840	808	806	877	1078
Social sciences	3,099	2,986	3,038	3,354	3,909
Engineering	1,707	1,751	1,770	1,940	2,398
Nonscience/nonengineering	9,864	9,912	10,094	11,663	15,041
No report	37	33	22	23	75
Life scientists	28,600	28,847	29,525	30,699	32,405
Computer and mathematical sciences	81	84	88	92	96
Life sciences	19,513	19,462	19,817	20,542	21,472
Physical sciences	847	853	873	900	952
Social sciences	1,138	1,105	1,082	1,100	1,132
Engineering	545	548	564	575	606
Nonscience/nonengineering	6,471	6,790	7,096	7,480	8,003
No report	5	5	5	10	144
Physical scientists	23,927	23,639	23,442	23,561	23,851
Computer and mathematical sciences	510	509	498	491	501
Life sciences	3,180	3,206	3,211	3,309	3,384
Physical sciences	16,098	15,733	15,479	15,411	15,453
Social sciences	456	452	466	482	507
Engineering	1,961	1,921	1,922	1,946	1,937
Nonscience/nonengineering	1,714	1,800	1,858	1,910	2,029
No report	8	18	8	12	40

Table 6. Federal scientists and engineers, by major occupational group and highest degree field: 1998-2002

Major occupational group and highest degree field	1998	1999	2000	2001	2002
Social scientists	22,883	22,852	23,484	24,506	25,345
Computer and mathematical sciences	159	162	176	190	220
Life sciences	480	468	492	483	548
Physical sciences	157	173	172	173	175
Social sciences	13,376	13,307	13,528	14,007	14,528
Engineering	177	192	188	197	226
Nonscience/nonengineering	8,496	8,491	8,880	9,177	9,607
No report	38	59	48	279	41
All engineers	86,230	83,590	82,606	83,157	85,358
Computer and mathematical sciences	2,362	2,253	2,244	2,301	2,370
Life sciences	353	360	389	401	499
Physical sciences	2,896	2,742	2,712	2,627	2,508
Social sciences	287	239	239	205	244
Engineering	72,992	70,697	69,525	69,744	70,755
Non-science/non-engineering	7,307	7,276	7,469	7,806	8,874
No report	33	23	28	73	108
Aerospace engineers	7,578	7,451	7,519	7,734	8,025
Computer and mathematical sciences	236	222	220	226	233
Life sciences	15	15	14	20	25
Physical sciences	292	274	265	263	277
Social sciences	21	18	15	18	18
Engineering	6,534	6,438	6,513	6,672	6,751
Nonscience/nonengineering	479	483	492	534	719
No report	1	1	0	1	2
Chemical engineers	1,019	1,015	983	980	1,012
Computer and mathematical sciences	6	6	6	5	3
Life sciences	4	4	4	4	4
Physical sciences	73	75	73	63	63
Social sciences	3	3	3	2	3
Engineering	888	875	846	856	887
Nonscience/nonengineering	42	49	51	50	52
No report	3	3	0	0	0
Civil engineers	11,058	10,650	10,418	10,512	10,668
Computer and mathematical sciences	34	34	38	35	32
Life sciences	50	54	58	55	59
Physical sciences	77	72	75	74	80
Social sciences	31	27	23	27	29
Engineering	10,126	9,741	9,487	9,553	9,668
Nonscience/nonengineering	739	721	733	747	775
No report	1	1	4	21	25

Table 6. Federal scientists and engineers, by major occupational group and highest degree field: 1998-2002

Major occupational group and highest degree field	1998	1999	2000	2001	2002
Electrical, electronics, and computer engineers	27,449	26,430	25,771	25,953	26,703
Computer and mathematical sciences	1,342	1,273	1,279	1,375	1,425
Life sciences	36	32	31	37	61
Physical sciences	1,057	1,001	984	940	893
Social sciences	89	71	71	52	59
Engineering	22,733	21,857	21,150	21,120	21,342
Nonscience/nonengineering	2,186	2,192	2,249	2,400	2,889
No report	6	4	7	29	34
Industrial engineers	1,981	1,818	1,695	1,644	1,706
Computer and mathematical sciences	19	19	17	23	24
Life sciences	8	9	8	9	11
Physical sciences	33	28	25	27	25
Social sciences	11	10	7	10	10
Engineering	1,604	1,478	1,363	1,306	1,345
Nonscience/nonengineering	301	268	274	266	287
No report	5	6	1	3	4
Mechanical engineers	9,151	8,931	8,696	8,826	9,314
Computer and mathematical sciences	51	53	48	48	57
Life sciences	10	12	12	13	22
Physical sciences	124	105	102	92	87
Social sciences	14	11	16	7	13
Engineering	8,331	8,143	7,912	8,032	8,390
Nonscience/nonengineering	619	606	604	630	733
No report	2	1	2	4	12
Other engineers	27,994	27,295	27,524	27,508	27,930
Computer and mathematical sciences	674	646	636	589	596
Life sciences	230	234	262	263	317
Physical sciences	1,240	1,187	1,188	1,168	1,083
Social sciences	118	99	104	89	112
Engineering	22,776	22,165	22,254	22,205	22,372
Nonscience/nonengineering	2,941	2,957	3,066	3,179	3,419
No report	15	7	14	15	31

SOURCE: National Science Foundation tabulations from Office of Personnel Management's Central Personnel Data Files.

Table 7. Federal scientists and engineers, by major occupational group and primary work activity: 1998-2002

Major occupational group and primary work activity	1998	1999	2000	2001	2002
All occupations	189,713	186,891	187,396	193,448	206,182
Clinical practice, counseling, and ancillary medical services	3,991	4,320	4,487	4,505	4,511
Construction	4,167	3,884	3,840	3,877	3,917
Data collection, processing, and analysis	14,159	13,202	13,328	13,700	13,905
Design	11,447	10,516	10,663	10,639	10,859
Development	26,822	25,960	25,818	26,223	26,949
Installations, operations, and maintenance	9,288	8,701	8,746	8,771	9,110
Management	11,018	10,647	10,619	10,658	10,551
Natural resources operations	13,645	13,768	14,004	14,502	15,319
Planning	5,847	4,949	4,858	4,688	4,630
Production	3,920	3,477	3,372	3,226	2,966
Regulatory enforcement and licensing	6,069	5,920	5,941	5,910	6,329
Research	21,380	21,411	21,704	21,964	20,873
Research contract and grant administration	1,053	1,016	960	1,042	1,051
Scientific and technical information	2,951	2,965	3,245	3,454	3,675
Standards and specifications	1,195	1,206	1,183	1,080	1,186
Teaching and training	369	356	377	373	377
Technical assistance and consulting	4,575	4,488	4,460	4,537	4,381
Test and evaluation	8,495	8,051	8,292	8,443	9,053
Other, not elsewhere classified	10,489	11,152	11,844	12,819	15,580
Activity unknown	28,833	30,902	29,655	33,037	40,960
All scientists	103,483	103,301	104,790	110,291	120,824
Clinical practice, counseling, and ancillary medical services	3,932	4,259	4,431	4,440	4,458
Construction	114	107	110	134	130
Data collection, processing, and analysis	12,752	11,879	12,037	12,433	12,651
Design	373	405	420	445	474
Development	5,926	5,818	5,710	5,969	6,209
Installations, operations, and maintenance	464	469	498	536	555
Management	3,532	3,500	3,557	3,671	3,667
Natural resources operations	12,292	12,431	12,630	13,111	13,872
Planning	3,357	2,606	2,501	2,345	2,309
Production	142	129	128	148	140
Regulatory enforcement and licensing	2,616	2,639	2,665	2,621	2,867
Research	16,994	16,939	17,134	17,340	16,112
Research contract and grant administration	736	717	680	750	769
Scientific and technical information	1,862	1,876	2,046	2,164	2,325
Standards and specifications	332	434	419	300	293
Teaching and training	246	234	257	260	249
Technical assistance and consulting	2,721	2,645	2,628	2,637	2,530
Test and evaluation	2,110	2,010	2,007	2,098	2,306
Other, not elsewhere classified	4,290	4,950	5,340	6,055	8,245
Activity unknown	28,692	29,254	29,592	32,834	40,663

Table 7. Federal scientists and engineers, by major occupational group and primary work activity: 1998-2002

Major occupational group and primary work activity	1998	1999	2000	2001	2002
Computer and mathematical scientists	28,073	27,963	28,339	31,525	39,223
Clinical practice, counseling, and ancillary medical services	11	10	10	8	11
Construction	1	1	1	2	1
Data collection, processing, and analysis	3,394	3,088	3,150	3,321	3,326
Design	107	134	131	134	155
Development	3,746	3,682	3,639	3,823	4,051
Installations, operations, and maintenance	140	147	158	188	208
Management	376	371	398	401	387
Natural resources operations	30	26	26	22	19
Planning	276	250	219	214	207
Production	25	21	23	46	38
Regulatory enforcement and licensing	50	51	54	55	131
Research	1,403	1,426	1,414	1,431	1,374
Research contract and grant administration	88	89	89	106	101
Scientific and technical information	129	158	182	190	215
Standards and specifications	31	29	26	28	25
Teaching and training	13	11	15	16	17
Technical assistance and consulting	123	115	123	107	102
Test and evaluation	597	598	578	589	650
Other, not elsewhere classified	678	728	774	802	977
Activity unknown	16,855	17,028	17,329	20,042	27,228
Life scientists	28,600	28,847	29,525	30,699	32,405
Clinical practice, counseling, and ancillary medical services	278	291	294	292	274
Construction	36	33	38	51	42
Data collection, processing, and analysis	1,123	1,160	1,229	1,321	1,448
Design	24	37	40	35	45
Development	158	160	145	230	245
Installations, operations, and maintenance	66	61	57	66	63
Management	899	906	972	1,050	1,098
Natural resources operations	10,764	10,920	11,081	11,468	12,128
Planning	945	929	921	911	941
Production	2	4	4	2	4
Regulatory enforcement and licensing	997	976	994	993	1,113
Research	6,886	7,045	7,264	7,487	6,631
Research contract and grant administration	169	164	164	196	223
Scientific and technical information	423	461	543	588	679
Standards and specifications	99	95	92	91	81
Teaching and training	81	83	92	95	92
Technical assistance and consulting	1,137	1,043	1,019	998	975
Test and evaluation	378	368	372	388	456
Other, not elsewhere classified	442	473	554	758	2,145
Activity unknown	3,693	3,638	3,650	3,679	3,722

Table 7. Federal scientists and engineers, by major occupational group and primary work activity: 1998-2002

Major occupational group and primary work activity	1998	1999	2000	2001	2002
Physical scientists	23,927	23,639	23,442	23,561	23,851
Clinical practice, counseling, and ancillary medical services	190	183	160	151	141
Construction	72	69	66	70	74
Data collection, processing, and analysis	5,713	5,687	5,664	5,513	5,560
Design	225	217	226	254	250
Development	1,771	1,742	1,686	1,676	1,661
Installations, operations, and maintenance	255	258	279	277	279
Management	1,502	1,500	1,448	1,404	1,404
Natural resources operations	897	908	932	998	1,051
Planning	439	397	394	397	392
Production	112	100	99	96	94
Regulatory enforcement and licensing	1,418	1,461	1,469	1,435	1,487
Research	6,824	6,597	6,536	6,516	6,201
Research contract and grant administration	333	314	289	302	288
Scientific and technical information	1,181	1,131	1,170	1,217	1,229
Standards and specifications	155	145	130	127	130
Teaching and training	78	78	76	75	74
Technical assistance and consulting	784	828	823	831	791
Test and evaluation	1,068	977	991	1,052	1,128
Other, not elsewhere classified	906	982	996	1,130	1,578
Activity unknown	4	65	8	40	39
Social scientists	22,883	22,852	23,484	24,506	25,345
Clinical practice, counseling, and ancillary medical services	3,453	3,775	3,967	3,989	4,032
Construction	5	4	5	11	13
Data collection, processing, and analysis	2,522	1,944	1,994	2,278	2,317
Design	17	17	23	22	24
Development	251	234	240	240	252
Installations, operations, and maintenance	3	3	4	5	5
Management	755	723	739	816	778
Natural resources operations	601	577	591	623	674
Planning	1,697	1,030	967	823	769
Production	3	4	2	4	4
Regulatory enforcement and licensing	151	151	148	138	136
Research	1,881	1,871	1,920	1,906	1,906
Research contract and grant administration	146	150	138	146	157
Scientific and technical information	129	126	151	169	202
Standards and specifications	47	165	171	54	57
Teaching and training	74	62	74	74	66
Technical assistance and consulting	677	659	663	701	662
Test and evaluation	67	67	66	69	72
Other, not elsewhere classified	2,264	2,767	3,016	3,365	3,545
Activity unknown	8,140	8,523	8,605	9,073	9,674

Table 7. Federal scientists and engineers, by major occupational group and primary work activity: 1998-2002

Major occupational group and primary work activity	1998	1999	2000	2001	2002
All engineers	86,230	83,590	82,606	83,157	85,358
Clinical practice, counseling, and ancillary medical services	59	61	56	65	53
Construction	4,053	3,777	3,730	3,743	3,787
Data collection, processing, and analysis	1,407	1,323	1,291	1,267	1,254
Design	11,074	10,111	10,243	10,194	10,385
Development	20,896	20,142	20,108	20,254	20,740
Installations, operations, and maintenance	8,824	8,232	8,248	8,235	8,555
Management	7,486	7,147	7,062	6,987	6,884
Natural resources operations	1,353	1,337	1,374	1,391	1,447
Planning	2,490	2,343	2,357	2,343	2,321
Production	3,778	3,348	3,244	3,078	2,826
Regulatory enforcement and licensing	3,453	3,281	3,276	3,289	3,462
Research	4,386	4,472	4,570	4,624	4,761
Research contract and grant administration	317	299	280	292	282
Teaching and training	123	122	120	113	128
Technical assistance and consulting	1,854	1,843	1,832	1,900	1,851
Test and evaluation	6,385	6,041	6,285	6,345	6,747
Scientific and technical information	1,089	1,089	1,199	1,290	1,350
Standards and specifications	863	772	764	780	893
Other, not elsewhere classified	6,199	6,202	6,504	6,764	7,335
Activity unknown	141	1,648	63	203	297
Aerospace engineers	7,578	7,451	7,519	7,734	8,025
Clinical practice, counseling, and ancillary medical services	0	0	0	0	0
Construction	0	0	0	0	0
Data collection, processing, and analysis	73	68	64	63	66
Design	382	364	323	346	365
Development	3,190	3,132	3,246	3,328	3,469
Installations, operations, and maintenance	232	227	238	241	264
Management	501	497	490	579	649
Natural resources operations	0	0	0	0	2
Planning	47	43	39	47	53
Production	330	319	313	290	246
Regulatory enforcement and licensing	174	165	169	181	193
Research	1,085	1,113	1,126	1,124	1,130
Research contract and grant administration	15	12	12	13	15
Scientific and technical information	94	102	105	137	151
Standards and specifications	107	103	104	119	137
Teaching and training	12	11	10	7	8
Technical assistance and consulting	38	39	36	41	37
Test and evaluation	909	874	884	869	887
Other, not elsewhere classified	388	380	360	348	350
Activity unknown	1	2	0	1	3

Table 7. Federal scientists and engineers, by major occupational group and primary work activity: 1998-2002

Major occupational group and primary work activity	1998	1999	2000	2001	2002
Chemical engineers	1,019	1,015	983	980	1,012
Clinical practice, counseling, and ancillary medical services	0	0	0	0	0
Construction	6	5	5	5	5
Data collection, processing, and analysis	65	66	63	60	56
Design	44	41	36	39	41
Development	310	309	311	322	335
Installations, operations, and maintenance	15	17	14	12	10
Management	54	52	53	53	48
Natural resources operations	3	3	3	4	3
Planning	7	4	4	3	4
Production	76	79	69	66	59
Regulatory enforcement and licensing	42	37	32	29	28
Research	166	162	156	149	166
Research contract and grant administration	23	20	21	23	23
Scientific and technical information	47	53	56	50	45
Standards and specifications	23	19	18	16	16
Teaching and training	0	0	0	1	1
Technical assistance and consulting	22	20	18	18	16
Test and evaluation	51	48	47	50	53
Other, not elsewhere classified	64	73	77	77	97
Activity unknown	1	7	0	3	6
Civil engineers	11,058	10,650	10,418	10,512	10,668
Clinical practice, counseling, and ancillary medical services	1	2	1	0	0
Construction	2,280	2,142	2,102	2,118	2,131
Data collection, processing, and analysis	180	175	167	165	162
Design	3,553	3,355	3,282	3,213	3,234
Development	162	162	150	156	169
Installations, operations, and maintenance	695	600	557	542	532
Management	721	695	668	654	637
Natural resources operations	663	669	695	721	779
Planning	978	915	918	889	863
Production	14	9	14	13	10
Regulatory enforcement and licensing	205	188	185	176	181
Research	366	356	363	360	339
Research contract and grant administration	17	15	14	18	19
Scientific and technical information	51	62	63	70	63
Standards and specifications	38	40	31	46	51
Teaching and training	1	2	2	3	3
Technical assistance and consulting	373	427	425	454	467
Test and evaluation	54	50	58	53	60
Other, not elsewhere classified	690	711	719	844	939
Activity unknown	16	75	4	17	29

Table 7. Federal scientists and engineers, by major occupational group and primary work activity: 1998-2002

Major occupational group and primary work activity	1998	1999	2000	2001	2002
Electrical, electronics, and computer engineers	27,449	26,430	25,771	25,953	26,703
Clinical practice, counseling, and ancillary medical services	6	4	4	4	2
Construction	299	285	273	274	273
Data collection, processing, and analysis	421	402	402	405	411
Design	2,594	2,404	2,459	2,429	2,465
Development	10,608	10,153	9,913	9,997	10,133
Installations, operations, and maintenance	4,123	3,804	3,801	3,779	3,927
Management	1,165	1,089	1,095	1,102	1,070
Natural resources operations	13	14	15	14	14
Planning	253	249	237	265	276
Production	1,212	1,044	951	893	841
Regulatory enforcement and licensing	307	266	259	277	296
Research	1,059	1,032	1,072	1,116	1,168
Research contract and grant administration	55	57	51	50	45
Scientific and technical information	233	244	303	320	336
Standards and specifications	211	174	173	168	200
Teaching and training	35	36	35	34	31
Technical assistance and consulting	238	189	194	215	200
Test and evaluation	3,052	2,838	2,853	2,815	2,960
Other, not elsewhere classified	1,463	1,640	1,629	1,706	1,917
Activity unknown	102	506	52	90	138
Industrial engineers	1,981	1,818	1,695	1,644	1,706
Clinical practice, counseling, and ancillary medical services	8	10	8	8	6
Construction	27	20	22	21	24
Data collection, processing, and analysis	16	12	13	13	21
Design	116	105	103	96	102
Development	148	151	139	153	193
Installations, operations, and maintenance	270	225	217	206	229
Management	205	181	176	168	156
Natural resources operations	3	2	2	1	2
Planning	72	60	57	54	52
Production	513	427	396	350	302
Regulatory enforcement and licensing	159	151	142	122	123
Research	64	64	63	60	63
Research contract and grant administration	6	6	6	6	6
Scientific and technical information	9	9	11	13	16
Standards and specifications	42	39	47	33	43
Teaching and training	3	2	2	3	5
Technical assistance and consulting	49	43	41	41	37
Test and evaluation	53	53	45	42	38
Other, not elsewhere classified	217	208	205	219	258
Activity unknown	1	50	0	35	30

Table 7. Federal scientists and engineers, by major occupational group and primary work activity: 1998-2002

Major occupational group and primary work activity	1998	1999	2000	2001	2002
Mechanical engineers	9,151	8,931	8,696	8,826	9,314
Clinical practice, counseling, and ancillary medical services	1	2	2	1	0
Construction	363	327	319	317	318
Data collection, processing, and analysis	104	112	112	99	106
Design	1,937	1,695	1,743	1,769	1,906
Development	2,752	2,604	2,617	2,659	2,687
Installations, operations, and maintenance	908	863	879	885	919
Management	336	292	289	272	266
Natural resources operations	4	3	3	2	2
Planning	91	95	84	86	87
Production	449	407	383	353	341
Regulatory enforcement and licensing	59	60	62	54	53
Research	448	482	492	496	560
Research contract and grant administration	25	22	24	24	22
Scientific and technical information	102	121	129	137	150
Standards and specifications	114	80	71	73	85
Teaching and training	2	1	1	1	1
Technical assistance and consulting	74	57	50	84	76
Test and evaluation	892	916	908	921	1,028
Other, not elsewhere classified	486	490	528	571	662
Activity unknown	4	302	0	22	45
Other engineers	27,994	27,295	27,524	27,508	27,930
Clinical practice, counseling, and ancillary medical services	43	43	41	52	45
Construction	1,078	998	1,009	1,008	1,036
Data collection, processing, and analysis	548	488	470	462	432
Design	2,448	2,147	2,297	2,302	2,272
Development	3,726	3,631	3,732	3,639	3,754
Installations, operations, and maintenance	2,581	2,496	2,542	2,570	2,674
Management	4,504	4,341	4,291	4,159	4,058
Natural resources operations	667	646	656	649	645
Planning	1,042	977	1,018	999	986
Production	1,184	1,063	1,118	1,113	1,027
Regulatory enforcement and licensing	2,507	2,414	2,427	2,450	2,588
Research	1,198	1,263	1,298	1,319	1,335
Research contract and grant administration	176	167	152	158	152
Scientific and technical information	553	498	532	563	589
Standards and specifications	328	317	320	325	361
Teaching and training	70	70	70	64	79
Technical assistance and consulting	1,060	1,068	1,068	1,047	1,018
Test and evaluation	1,374	1,262	1,490	1,595	1,721
Other, not elsewhere classified	2,891	2,700	2,986	2,999	3,112
Activity unknown	16	706	7	35	46

SOURCE: National Science Foundation tabulations from Office of Personnel Management's Central Personnel Data Files.

Table 8. Federal scientists and engineers, by agency and primary work activity: 1998-2002

Agency and primary work activity	1998	1999	2000	2001	2002
All agencies	189,713	186,891	187,396	193,448	206,182
Clinical practice, counseling, and ancillary medical services	3,991	4,320	4,487	4,505	4,511
Construction	4,167	3,884	3,840	3,877	3,917
Data collection, processing, and analysis	14,159	13,202	13,328	13,700	13,905
Design	11,447	10,516	10,663	10,639	10,859
Development	26,822	25,960	25,818	26,223	26,949
Installations, operations, and maintenance	9,288	8,701	8,746	8,771	9,110
Management	11,018	10,647	10,619	10,658	10,551
Natural resources operations	13,645	13,768	14,004	14,502	15,319
Planning	5,847	4,949	4,858	4,688	4,630
Production	3,920	3,477	3,372	3,226	2,966
Regulatory enforcement and licensing	6,069	5,920	5,941	5,910	6,329
Research	21,380	21,411	21,704	21,964	20,873
Research contract and grant administration	1,053	1,016	960	1,042	1,051
Scientific and technical information	2,951	2,965	3,245	3,454	3,675
Standards and specifications	1,195	1,206	1,183	1,080	1,186
Teaching and training	369	356	377	373	377
Technical assistance and consulting	4,575	4,488	4,460	4,537	4,381
Test and evaluation	8,495	8,051	8,292	8,443	9,053
Other, not elsewhere classified	10,489	11,152	11,844	12,819	15,580
Activity unknown	28,833	30,902	29,655	33,037	40,960
Department of Agriculture	17,555	16,958	17,110	17,729	19,056
Clinical practice, counseling, and ancillary medical services	7	6	4	4	4
Construction	139	130	110	109	108
Data collection, processing, and analysis	1,254	1,222	1,227	1,195	1,226
Design	237	213	210	215	221
Development	101	100	95	164	177
Installations, operations, and maintenance	23	28	31	32	38
Management	668	684	710	742	751
Natural resources operations	8,525	8,362	8,372	8,650	9,241
Planning	552	544	536	525	518
Production	4	6	6	4	5
Regulatory enforcement and licensing	107	112	114	110	110
Research	3,081	2,787	2,768	2,820	2,851
Research contract and grant administration	25	23	22	21	50
Scientific and technical information	236	243	316	337	412
Standards and specifications	19	17	14	21	29
Teaching and training	8	9	11	13	12
Technical assistance and consulting	610	527	507	520	514
Test and evaluation	225	206	211	193	193
Other, not elsewhere classified	132	126	169	214	294
Activity unknown	1,602	1,613	1,677	1,840	2,302

Table 8. Federal scientists and engineers, by agency and primary work activity: 1998-2002

Agency and primary work activity	1998	1999	2000	2001	2002
Department of Commerce	9,833	9,442	9,520	9,854	10,684
Clinical practice, counseling, and ancillary medical services	0	0	0	0	0
Construction	28	26	27	25	23
Data collection, processing, and analysis	4,019	3,778	3,838	3,941	4,073
Design	64	61	63	65	63
Development	501	472	468	460	455
Installations, operations, and maintenance	193	206	205	197	198
Management	479	459	448	455	491
Natural resources operations	107	161	179	203	207
Planning	192	186	175	167	152
Production	1	2	0	5	5
Regulatory enforcement and licensing	40	40	40	40	33
Research	2,411	2,235	2,192	2,218	2,224
Research contract and grant administration	21	20	19	18	18
Scientific and technical information	152	165	182	188	197
Standards and specifications	24	22	21	21	22
Teaching and training	21	19	18	18	19
Technical assistance and consulting	82	83	83	87	91
Test and evaluation	43	59	59	57	60
Other, not elsewhere classified	123	122	123	142	143
Activity unknown	1,332	1,326	1,380	1,547	2,210
Department of Defense	85,063	82,678	81,529	83,294	89,409
Clinical practice, counseling, and ancillary medical services	708	676	678	654	658
Construction	2,889	2,729	2,729	2,787	2,807
Data collection, processing, and analysis	2,494	2,384	2,311	2,220	2,214
Design	8,874	8,131	8,301	8,287	8,476
Development	20,452	19,757	19,587	19,905	20,653
Installations, operations, and maintenance	6,987	6,676	6,737	6,751	7,070
Management	5,496	5,229	5,278	5,125	4,973
Natural resources operations	1,005	1,010	1,032	1,007	1,012
Planning	2,668	2,511	2,488	2,450	2,477
Production	3,541	3,122	3,039	2,892	2,644
Regulatory enforcement and licensing	724	689	686	670	680
Research	5,294	5,233	5,291	5,461	5,742
Research contract and grant administration	303	301	289	276	255
Scientific and technical information	841	892	1,038	1,140	1,240
Standards and specifications	427	359	356	377	486
Teaching and training	244	241	257	259	270
Technical assistance and consulting	943	802	838	845	800
Test and evaluation	6,222	5,881	6,055	6,098	6,548
Other, not elsewhere classified	5,259	5,069	5,400	5,733	6,389
Activity unknown	9,692	10,986	9,139	10,357	14,015

Table 8. Federal scientists and engineers, by agency and primary work activity: 1998-2002

Agency and primary work activity	1998	1999	2000	2001	2002
Department of the Air Force	15,842	15,095	14,769	14,799	15,777
Clinical practice, counseling, and ancillary medical services	112	109	96	79	69
Construction	324	306	305	294	259
Data collection, processing, and analysis	620	567	550	561	540
Design	1,118	1,032	963	925	952
Development	3,523	3,316	3,242	3,156	3,151
Installations, operations, and maintenance	2,571	2,513	2,516	2,541	2,676
Management	946	920	928	904	926
Natural resources operations	223	227	223	210	210
Planning	555	496	502	489	498
Production	541	443	374	328	322
Regulatory enforcement and licensing	75	80	76	76	74
Research	871	811	777	778	775
Research contract and grant administration	46	44	47	49	53
Scientific and technical information	271	282	305	324	351
Standards and specifications	36	31	26	23	20
Teaching and training	35	37	35	36	36
Technical assistance and consulting	278	250	243	244	234
Test and evaluation	964	960	938	930	1,009
Other, not elsewhere classified	632	655	646	721	811
Activity unknown	2,101	2,016	1,977	2,131	2,811
Department of the Army	29,322	28,520	28,195	28,962	30,293
Clinical practice, counseling, and ancillary medical services	380	388	390	379	381
Construction	1,869	1,832	1,817	1,887	1,894
Data collection, processing, and analysis	883	830	794	756	735
Design	3,980	3,868	3,797	3,766	3,753
Development	6,168	6,068	5,922	5,962	6,182
Installations, operations, and maintenance	1,133	1,102	1,004	933	905
Management	2,798	2,721	2,691	2,619	2,501
Natural resources operations	574	601	624	602	611
Planning	1,597	1,539	1,515	1,467	1,470
Production	1,012	948	891	842	797
Regulatory enforcement and licensing	592	545	548	538	541
Research	1,986	1,950	2,064	2,127	2,241
Research contract and grant administration	63	69	68	67	54
Scientific and technical information	247	276	297	357	414
Standards and specifications	72	62	58	58	53
Teaching and training	68	62	65	69	63
Technical assistance and consulting	265	248	244	279	267
Test and evaluation	1,103	1,019	1,009	1,050	1,120
Other, not elsewhere classified	1,657	1,643	1,695	1,926	2,170
Activity unknown	2,875	2,749	2,702	3,278	4,141

Table 8. Federal scientists and engineers, by agency and primary work activity: 1998-2002

Agency and primary work activity	1998	1999	2000	2001	2002
Department of the Navy	34,695	34,133	33,491	34,320	37,609
Clinical practice, counseling, and ancillary medical services	215	178	191	194	206
Construction	662	559	575	582	627
Data collection, processing, and analysis	921	907	894	827	878
Design	3,687	3,153	3,433	3,473	3,706
Development	10,195	9,813	9,853	10,235	10,787
Installations, operations, and maintenance	3,188	2,976	3,129	3,210	3,429
Management	1,530	1,379	1,440	1,394	1,361
Natural resources operations	206	181	184	194	190
Planning	484	441	444	473	484
Production	1,117	926	1,002	936	859
Regulatory enforcement and licensing	54	60	58	52	62
Research	2,226	2,393	2,355	2,433	2,557
Research contract and grant administration	134	131	124	116	110
Scientific and technical information	285	292	328	365	377
Standards and specifications	146	120	121	130	129
Teaching and training	60	129	143	136	140
Technical assistance and consulting	356	255	305	279	263
Test and evaluation	3,988	3,743	3,952	3,956	4,258
Other, not elsewhere classified	2,846	2,626	2,888	2,933	3,253
Activity unknown	2,395	3,871	2,072	2,402	3,933
Other Defense Agencies	5,204	4,930	5,074	5,213	5,730
Clinical practice, counseling, and ancillary medical services	1	1	1	2	2
Construction	34	32	32	24	27
Data collection, processing, and analysis	70	80	73	76	61
Design	89	78	108	123	65
Development	566	560	570	552	533
Installations, operations, and maintenance	95	85	88	67	60
Management	222	209	219	208	185
Natural resources operations	2	1	1	1	1
Planning	32	35	27	21	25
Production	871	805	772	786	666
Regulatory enforcement and licensing	3	4	4	4	3
Research	211	79	95	123	169
Research contract and grant administration	60	57	50	44	38
Scientific and technical information	38	42	108	94	98
Standards and specifications	173	146	151	166	284
Teaching and training	81	13	14	18	31
Technical assistance and consulting	44	49	46	43	36
Test and evaluation	167	159	156	162	161
Other, not elsewhere classified	124	145	171	153	155
Activity unknown	2,321	2,350	2,388	2,546	3,130

Table 8. Federal scientists and engineers, by agency and primary work activity: 1998-2002

Agency and primary work activity	1998	1999	2000	2001	2002
Department of Energy	5,192	5,057	4,934	5,059	5,037
Clinical practice, counseling, and ancillary medical services	0	0	0	0	0
Construction	100	94	90	89	101
Data collection, processing, and analysis	223	215	192	202	197
Design	173	163	194	213	213
Development	476	455	421	432	420
Installations, operations, and maintenance	336	313	334	315	329
Management	831	846	809	786	795
Natural resources operations	50	50	46	49	56
Planning	224	222	195	202	196
Production	307	293	277	277	259
Regulatory enforcement and licensing	426	402	387	353	372
Research	192	189	193	208	197
Research contract and grant administration	146	140	133	131	116
Scientific and technical information	88	92	83	78	70
Standards and specifications	31	31	21	20	19
Teaching and training	11	15	15	13	11
Technical assistance and consulting	352	347	326	370	362
Test and evaluation	29	22	17	14	16
Other, not elsewhere classified	700	691	676	696	679
Activity unknown	497	477	525	611	629
Department of Health and Human Services	8,872	9,376	9,744	10,228	10,916
Clinical practice, counseling, and ancillary medical services	141	146	150	159	141
Construction	50	53	61	66	70
Data collection, processing, and analysis	547	545	525	506	455
Design	121	127	124	123	111
Development	132	130	139	129	115
Installations, operations, and maintenance	40	42	40	40	36
Management	74	81	87	83	61
Natural resources operations	0	0	0	0	1
Planning	87	85	86	69	64
Production	1	1	1	0	0
Regulatory enforcement and licensing	778	789	829	842	1,048
Research	4,273	4,675	4,908	4,973	3,499
Research contract and grant administration	148	144	147	154	172
Scientific and technical information	81	86	89	75	59
Standards and specifications	42	38	34	29	17
Teaching and training	8	8	7	5	5
Technical assistance and consulting	557	564	578	605	548
Test and evaluation	689	679	667	757	901
Other, not elsewhere classified	91	111	134	342	2,166
Activity unknown	1,012	1,072	1,138	1,271	1,447

Table 8. Federal scientists and engineers, by agency and primary work activity: 1998-2002

Agency and primary work activity	1998	1999	2000	2001	2002
Department of Housing and Urban Development	304	297	280	287	310
Clinical practice, counseling, and ancillary medical services	1	0	0	1	1
Construction	37	31	30	35	39
Data collection, processing, and analysis	15	14	13	14	15
Design	0	0	0	0	0
Development	1	1	1	1	1
Installations, operations, and maintenance	2	2	2	2	3
Management	2	2	1	1	1
Natural resources operations	0	0	0	0	0
Planning	19	18	17	16	16
Production	0	0	0	0	0
Regulatory enforcement and licensing	0	0	0	0	0
Research	14	9	9	7	6
Research contract and grant administration	0	0	0	0	0
Scientific and technical information	2	5	4	3	4
Standards and specifications	3	3	2	2	2
Teaching and training	0	0	0	0	0
Technical assistance and consulting	10	6	9	13	14
Test and evaluation	0	0	0	0	0
Other, not elsewhere classified	62	79	76	78	84
Activity unknown	136	127	116	114	124
Department of the Interior	12,209	12,523	12,860	13,425	14,315
Clinical practice, counseling, and ancillary medical services	2	2	2	3	2
Construction	235	218	217	210	220
Data collection, processing, and analysis	1,931	2,028	2,125	2,222	2,371
Design	534	537	533	534	568
Development	191	183	175	192	183
Installations, operations, and maintenance	218	216	218	221	221
Management	568	552	550	562	570
Natural resources operations	3,943	4,166	4,358	4,578	4,791
Planning	614	600	602	579	566
Production	5	3	2	2	2
Regulatory enforcement and licensing	110	114	116	112	114
Research	1,633	1,670	1,674	1,707	1,738
Research contract and grant administration	16	17	19	21	20
Scientific and technical information	184	199	234	296	351
Standards and specifications	116	114	103	101	97
Teaching and training	18	17	20	21	18
Technical assistance and consulting	550	526	525	521	508
Test and evaluation	46	45	45	42	41
Other, not elsewhere classified	410	398	408	461	463
Activity unknown	885	918	934	1,040	1,471

Table 8. Federal scientists and engineers, by agency and primary work activity: 1998-2002

Agency and primary work activity	1998	1999	2000	2001	2002
Department of Justice	4,151	4,256	4,452	4,617	5,019
Clinical practice, counseling, and ancillary medical services	454	520	562	422	389
Construction	4	3	5	4	3
Data collection, processing, and analysis	104	97	111	99	96
Design	5	5	5	3	5
Development	36	35	31	29	29
Installations, operations, and maintenance	2	2	1	4	4
Management	32	35	31	19	10
Natural resources operations	0	0	0	0	0
Planning	11	15	14	2	1
Production	1	2	3	3	4
Regulatory enforcement and licensing	2	1	2	2	3
Research	225	193	208	190	191
Research contract and grant administration	69	82	64	53	44
Scientific and technical information	49	43	51	58	67
Standards and specifications	0	0	0	0	1
Teaching and training	11	4	4	3	2
Technical assistance and consulting	11	11	9	4	4
Test and evaluation	16	15	16	20	20
Other, not elsewhere classified	1,371	1,310	1,340	1,596	1,710
Activity unknown	1,748	1,883	1,995	2,106	2,436
Department of Labor	2,117	2,101	2,207	2,282	2,327
Clinical practice, counseling, and ancillary medical services	454	520	562	422	389
Construction	0	0	0	1	0
Data collection, processing, and analysis	1,235	815	906	1,258	1,274
Design	0	0	0	3	2
Development	4	1	1	0	0
Installations, operations, and maintenance	3	4	4	3	3
Management	15	11	11	123	110
Natural resources operations	1	0	0	0	0
Planning	31	122	112	63	57
Production	0	0	0	1	1
Regulatory enforcement and licensing	144	82	81	109	115
Research	126	121	121	36	36
Research contract and grant administration	0	0	0	0	0
Scientific and technical information	0	0	0	2	2
Standards and specifications	24	137	153	22	22
Teaching and training	1	1	1	2	2
Technical assistance and consulting	95	157	157	131	136
Test and evaluation	56	74	75	54	54
Other, not elsewhere classified	53	212	183	41	34
Activity unknown	328	363	401	432	478

Table 8. Federal scientists and engineers, by agency and primary work activity: 1998-2002

Agency and primary work activity	1998	1999	2000	2001	2002
Department of Transportation	5,508	5,420	5,498	5,839	6,169
Clinical practice, counseling, and ancillary medical services	3	3	3	5	6
Construction	328	290	289	293	304
Data collection, processing, and analysis	65	63	66	79	95
Design	650	570	558	595	633
Development	296	292	283	305	303
Installations, operations, and maintenance	567	521	504	541	571
Management	392	353	345	333	300
Natural resources operations	2	2	2	2	0
Planning	179	158	161	155	146
Production	4	5	3	4	4
Regulatory enforcement and licensing	300	289	294	299	337
Research	352	385	380	407	393
Research contract and grant administration	11	8	3	4	7
Scientific and technical information	29	31	35	54	51
Standards and specifications	171	167	157	179	199
Teaching and training	31	29	27	27	24
Technical assistance and consulting	306	361	372	426	438
Test and evaluation	429	385	391	409	455
Other, not elsewhere classified	897	983	1,087	1,058	1,078
Activity unknown	496	525	538	664	825
Department of the Treasury	3,432	3,486	3,436	3,604	4,128
Clinical practice, counseling, and ancillary medical services	1	0	1	1	1
Construction	8	6	8	9	13
Data collection, processing, and analysis	265	264	263	251	235
Design	32	27	26	21	20
Development	49	52	38	27	31
Installations, operations, and maintenance	23	23	22	17	18
Management	42	41	28	26	23
Natural resources operations	0	0	0	0	0
Planning	89	99	70	63	52
Production	17	12	13	13	15
Regulatory enforcement and licensing	222	206	244	252	248
Research	181	200	175	184	224
Research contract and grant administration	11	8	6	3	3
Scientific and technical information	39	44	51	59	56
Standards and specifications	12	12	30	22	12
Teaching and training	0	0	0	0	0
Technical assistance and consulting	24	17	14	11	6
Test and evaluation	66	66	65	83	80
Other, not elsewhere classified	182	189	153	181	171
Activity unknown	2,169	2,220	2,229	2,381	2,920

Table 8. Federal scientists and engineers, by agency and primary work activity: 1998-2002

Agency and primary work activity	1998	1999	2000	2001	2002
Department of Veteran Affairs	5,082	5,375	5,544	5,947	6,471
Clinical practice, counseling, and ancillary medical services	2,667	2,957	3,078	3,249	3,303
Construction	108	100	90	89	89
Data collection, processing, and analysis	6	5	4	4	4
Design	17	16	19	18	15
Development	0	0	0	1	1
Installations, operations, and maintenance	353	342	332	339	334
Management	444	413	386	371	370
Natural resources operations	0	4	4	4	3
Planning	52	47	46	43	43
Production	1	1	1	0	1
Regulatory enforcement and licensing	4	2	2	2	2
Research	332	328	336	331	315
Research contract and grant administration	3	4	3	3	2
Scientific and technical information	14	13	13	14	14
Standards and specifications	6	6	5	5	5
Teaching and training	6	6	11	6	6
Technical assistance and consulting	3	3	5	3	3
Test and evaluation	6	5	5	5	5
Other, not elsewhere classified	50	52	54	58	55
Activity unknown	1,010	1,071	1,150	1,402	1,901
Environmental Protection Agency	8,858	8,768	8,675	8,587	8,598
Clinical practice, counseling, and ancillary medical services	0	0	0	0	0
Construction	20	11	11	9	8
Data collection, processing, and analysis	1,409	1,321	1,305	1,255	1,192
Design	2	3	4	4	4
Development	168	148	128	123	117
Installations, operations, and maintenance	7	11	6	5	6
Management	222	262	284	279	295
Natural resources operations	0	0	0	0	0
Planning	134	112	108	105	100
Production	0	0	0	0	0
Regulatory enforcement and licensing	1,402	1,429	1,392	1,347	1,374
Research	645	677	665	662	698
Research contract and grant administration	80	79	74	72	73
Scientific and technical information	1,165	1,096	1,076	1,079	1,076
Standards and specifications	220	206	196	190	189
Teaching and training	1	2	1	2	2
Technical assistance and consulting	776	851	824	803	780
Test and evaluation	48	31	33	43	38
Other, not elsewhere classified	171	136	140	138	161
Activity unknown	2,388	2,393	2,428	2,471	2,485

Table 8. Federal scientists and engineers, by agency and primary work activity: 1998-2002

Agency and primary work activity	1998	1999	2000	2001	2002
General Services Administration	734	718	728	711	793
Clinical practice, counseling, and ancillary medical services	0	0	0	0	0
Construction	140	131	115	95	76
Data collection, processing, and analysis	2	5	5	4	6
Design	155	136	118	90	83
Development	2	1	4	8	12
Installations, operations, and maintenance	7	6	9	10	8
Management	8	16	14	15	15
Natural resources operations	0	0	0	2	2
Planning	0	1	1	1	3
Production	0	0	0	0	0
Regulatory enforcement and licensing	2	3	1	1	3
Research	3	3	3	2	2
Research contract and grant administration	0	0	1	2	3
Scientific and technical information	0	0	3	4	3
Standards and specifications	10	10	10	10	12
Teaching and training	0	0	0	1	1
Technical assistance and consulting	4	4	4	7	6
Test and evaluation	7	6	7	4	5
Other, not elsewhere classified	74	71	77	91	111
Activity unknown	320	325	356	364	442
National Aeronautics and Space Administration	10,702	10,542	10,755	10,862	10,863
Clinical practice, counseling, and ancillary medical services	4	5	5	4	5
Construction	30	26	26	25	25
Data collection, processing, and analysis	211	204	201	203	201
Design	509	481	458	435	412
Development	4,375	4,309	4,423	4,421	4,426
Installations, operations, and maintenance	295	269	258	249	225
Management	1,614	1,608	1,578	1,672	1,717
Natural resources operations	1	1	3	3	2
Planning	128	122	124	126	118
Production	35	28	26	24	25
Regulatory enforcement and licensing	15	17	17	22	26
Research	2,087	2,128	2,170	2,181	2,162
Research contract and grant administration	7	7	6	6	6
Scientific and technical information	26	24	29	32	36
Standards and specifications	40	35	37	40	38
Teaching and training	1	1	1	1	2
Technical assistance and consulting	61	61	59	56	52
Test and evaluation	565	534	605	627	603
Other, not elsewhere classified	566	549	584	576	580
Activity unknown	132	133	145	159	202

Table 8. Federal scientists and engineers, by agency and primary work activity: 1998-2002

Agency and primary work activity	1998	1999	2000	2001	2002
National Science Foundation	303	270	252	392	407
Clinical practice, counseling, and ancillary medical services	0	0	0	0	0
Construction	0	0	0	0	0
Data collection, processing, and analysis	26	26	25	34	36
Design	0	0	0	0	0
Development	1	0	0	0	1
Installations, operations, and maintenance	3	3	3	3	3
Management	17	14	14	15	16
Natural resources operations	0	0	0	0	0
Planning	17	19	23	23	25
Production	0	0	0	0	0
Regulatory enforcement and licensing	3	4	4	6	6
Research	0	0	0	2	2
Research contract and grant administration	204	175	156	261	267
Scientific and technical information	0	0	1	1	2
Standards and specifications	0	0	0	0	0
Teaching and training	0	0	0	0	0
Technical assistance and consulting	1	1	0	0	0
Test and evaluation	0	0	0	0	0
Other, not elsewhere classified	2	2	2	4	4
Activity unknown	29	26	24	43	45
Nuclear Regulatory Commission	1,563	1,527	1,534	1,582	1,699
Clinical practice, counseling, and ancillary medical services	0	0	0	0	0
Construction	0	0	0	0	0
Data collection, processing, and analysis	0	0	0	0	0
Design	2	0	1	0	0
Development	0	0	0	0	0
Installations, operations, and maintenance	0	0	0	0	0
Management	0	0	0	0	0
Natural resources operations	0	0	0	0	0
Planning	0	0	0	0	0
Production	0	0	0	0	0
Regulatory enforcement and licensing	1,536	1,508	1,512	1,510	1,612
Research	0	0	1	0	0
Research contract and grant administration	0	0	0	0	0
Scientific and technical information	8	6	6	0	0
Standards and specifications	1	1	0	0	0
Teaching and training	0	0	0	0	0
Technical assistance and consulting	0	0	0	0	0
Test and evaluation	0	0	0	0	0
Other, not elsewhere classified	0	1	1	0	0
Activity unknown	16	11	13	72	87

Table 8. Federal scientists and engineers, by agency and primary work activity: 1998-2002

Agency and primary work activity	1998	1999	2000	2001	2002
US International Development Cooperation Agency	261	227	221	196	192
Clinical practice, counseling, and ancillary medical services	0	0	0	0	0
Construction	0	0	0	0	0
Data collection, processing, and analysis	1	1	2	2	3
Design	0	0	0	0	0
Development	0	0	1	1	1
Installations, operations, and maintenance	0	0	0	0	0
Management	0	0	1	1	2
Natural resources operations	1	4	1	0	0
Planning	0	0	0	0	0
Production	0	0	0	0	0
Regulatory enforcement and licensing	0	0	0	0	0
Research	0	0	2	1	1
Research contract and grant administration	0	0	0	0	0
Scientific and technical information	0	0	1	1	1
Standards and specifications	0	0	0	0	0
Teaching and training	0	0	0	0	0
Technical assistance and consulting	140	122	112	96	81
Test and evaluation	0	0	0	0	0
Other, not elsewhere classified	8	7	8	8	7
Activity unknown	111	93	93	86	96
All other agencies ¹	7,974	7,870	8,117	8,953	9,789
Clinical practice, counseling, and ancillary medical services	2	4	3	2	0
Construction	51	36	32	31	31
Data collection, processing, and analysis	352	215	209	211	212
Design	72	46	49	33	33
Development	37	24	23	25	24
Installations, operations, and maintenance	229	37	40	42	43
Management	114	41	44	50	51
Natural resources operations	10	8	7	4	4
Planning	850	88	100	99	96
Production	3	2	1	1	1
Regulatory enforcement and licensing	254	233	220	233	246
Research	531	578	608	574	592
Research contract and grant administration	9	8	18	17	15
Scientific and technical information	37	26	33	33	34
Standards and specifications	49	48	44	41	36
Teaching and training	8	4	4	2	3
Technical assistance and consulting	50	45	38	39	38
Test and evaluation	48	43	41	37	34
Other, not elsewhere classified	338	1,044	1,229	1,402	1,451
Activity unknown	4,930	5,340	5,374	6,077	6,845

¹ Included under all other agencies is the U.S. Department of State.

SOURCE: National Science Foundation tabulations from Office of Personnel Management's Central Personnel Data Files.

Table 9. Federal scientists and engineers, by major occupational group and race/ethnicity: 1998-2002

Major occupational group and race/ethnicity	1998	1999	2000	2001	2002
All occupations	189,713	186,891	187,396	193,448	206,182
American Indian/Alaskan Native	1583	1,642	1,675	1,791	1,916
Asian/Pacific Islander	14,028	14,110	14,353	15,171	16,763
Black	10,283	10,256	10,776	11,440	12,753
Hispanic	6,757	6,784	6,860	7,232	7,955
White	156,945	153,899	153,597	157,642	166,533
All other	46	54	63	66	59
No report	71	146	72	106	203
All scientists	103,483	103,301	104,790	110,291	120,824
American Indian/Alaskan Native	952	1,029	1,058	1,149	1,258
Asian/Pacific Islander	5,261	5,490	5,805	6,429	7,594
Black	6,720	6,778	7,310	7,893	9,051
Hispanic	3,028	3,101	3,172	3,449	3,986
White	87,440	86,780	87,347	91,259	98,761
All other	39	40	49	53	48
No report	43	83	49	59	126
Computer and mathematical scientists	28,073	27,963	28,339	31,525	39,223
American Indian/Alaskan Native	167	191	191	240	320
Asian/Pacific Islander	1,931	2,011	2,133	2,438	3,215
Black	2,756	2,821	2,994	3,393	4,361
Hispanic	782	776	775	911	1,253
White	22,419	22,125	22,224	24,513	30,011
All other	2	1	3	7	8
No report	16	38	19	23	55
Life scientists	28,600	28,847	29,525	30,699	32,405
American Indian/Alaskan Native	401	437	450	478	511
Asian/Pacific Islander	1,277	1,354	1,488	1,667	1,917
Black	1,201	1,209	1,261	1,297	1,366
Hispanic	828	855	884	975	1,051
White	24,868	24,961	25,413	26,252	27,526
All other	15	16	18	17	15
No report	10	15	11	13	19
Physical scientists	23,927	23,639	23,442	23,561	23,851
American Indian/Alaskan Native	117	133	141	146	146
Asian/Pacific Islander	1,465	1,490	1,494	1,567	1,632
Black	860	843	846	858	885
Hispanic	570	578	591	613	654
White	20,897	20,569	20,346	20,352	20,501
All other	14	13	15	15	12
No report	4	13	9	10	21

Table 9. Federal scientists and engineers, by major occupational group and race/ethnicity: 1998-2002

Major occupational group and race/ethnicity	1998	1999	2000	2001	2002
Social scientists	22,883	22,852	23,484	24,506	25,345
American Indian/Alaskan Native	267	268	276	285	281
Asian/Pacific Islander	588	635	690	757	830
Black	1,903	1,905	2,209	2,345	2,439
Hispanic	848	892	922	950	1,028
White	19,256	19,125	19,364	20,142	20,723
All other	8	10	13	14	13
No report	13	17	10	13	31
All engineers	86,230	83,590	82,606	83,157	85,358
American Indian/Alaskan Native	631	613	617	642	658
Asian/Pacific Islander	8,767	8,620	8,548	8,742	9,169
Black	3,563	3,478	3,466	3,547	3,702
Hispanic	3,729	3,683	3,688	3,783	3,969
White	69,505	67,119	66,250	66,383	67,772
All other	7	14	14	13	11
No report	28	63	23	47	77
Aerospace engineers	7,578	7,451	7,519	7,734	8,025
American Indian/Alaskan Native	46	39	43	47	42
Asian/Pacific Islander	496	506	520	554	588
Black	268	270	278	298	323
Hispanic	306	319	320	324	341
White	6,462	6,317	6,358	6,509	6,730
All other	0	0	0	0	0
No report	0	0	0	2	1
Chemical engineers	1,019	1,015	983	980	1,012
American Indian/Alaskan Native	4	2	2	2	2
Asian/Pacific Islander	138	130	132	128	129
Black	39	38	39	35	38
Hispanic	52	48	50	50	48
White	785	797	760	763	793
All other	0	0	0	0	0
No report	1	0	0	2	2
Civil engineers	11,058	10,650	10,418	10,512	10,668
American Indian/Alaskan Native	147	134	139	141	143
Asian/Pacific Islander	989	941	925	945	973
Black	338	338	326	353	356
Hispanic	528	502	492	491	512
White	9,045	8,716	8,530	8,577	8,677
All other	3	3	2	2	1
No report	8	16	4	3	6

Table 9. Federal scientists and engineers, by major occupational group and race/ethnicity: 1998-2002

Major occupational group and race/ethnicity	1998	1999	2000	2001	2002
Electrical, electronics, and computer engineers	27,449	26,430	25,771	25,953	26,703
American Indian/Alaskan Native	153	154	154	161	167
Asian/Pacific Islander	3,623	3,552	3,469	3,572	3,794
Black	1,309	1,258	1,217	1,265	1,328
Hispanic	1,310	1,297	1,270	1,308	1,378
White	21,045	20,146	19,652	19,635	20,012
All other	1	3	2	2	2
No report	8	20	7	10	22
Industrial engineers	1,981	1,818	1,695	1,644	1,706
American Indian/Alaskan Native	16	15	12	13	14
Asian/Pacific Islander	165	164	151	141	145
Black	131	128	123	116	120
Hispanic	89	83	72	67	74
White	1,580	1,424	1,336	1,306	1,347
All other	0	0	0	0	0
No report	0	4	1	1	6
Mechanical engineers	9,151	8,931	8,696	8,826	9,314
American Indian/Alaskan Native	40	44	40	43	45
Asian/Pacific Islander	1,000	977	968	960	993
Black	292	286	293	300	311
Hispanic	313	313	312	324	351
White	7,501	7,300	7,079	7,190	7,607
All other	2	2	2	2	2
No report	3	9	2	7	5
Other engineers	27,994	27,295	27,524	27,508	27,930
American Indian/Alaskan Native	225	225	227	235	245
Asian/Pacific Islander	2,356	2,350	2,383	2,442	2,547
Black	1,186	1,160	1,190	1,180	1,226
Hispanic	1,131	1,121	1,172	1,219	1,265
White	23,087	22,419	22,535	22,403	22,606
All other	1	6	8	7	6
No report	8	14	9	22	35

SOURCE: National Science Foundation tabulations from Office of Personnel Management's Central Personnel Data Files.

Table 10. Federal scientists and engineers, by geographical division and state: 1998-2002

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Division and state	1998	1999	2000	2001	2002
United States	189,713	186,891	187,396	193,448	206,182
New England	6,401	6,395	6,343	6,559	6,891
Connecticut	424	431	428	424	434
Maine	745	827	870	912	991
Massachusetts	2,763	2,716	2,685	2,752	2,868
New Hampshire	291	289	286	303	315
Rhode Island	2,022	1,978	1,910	2,007	2,103
Vermont	156	154	164	161	180
Middle Atlantic	12,658	12,584	12,527	13,004	13,693
New Jersey	5,035	5,007	4,952	5,062	5,241
New York	3,143	3,126	3,126	3,185	3,390
Pennsylvania	4,480	4,451	4,449	4,757	5,062
East North Central	14,318	13,978	14,004	14,304	14,951
Illinois	3,652	3,528	3,503	3,614	3,753
Indiana	1,495	1,541	1,557	1,613	1,729
Michigan	2,077	2,029	2,028	2,082	2,187
Ohio	6,312	6,095	6,105	6,146	6,368
Wisconsin	782	785	811	849	914
West North Central	7,199	7,156	7,101	7,320	7,875
Iowa	537	538	546	553	596
Kansas	1,178	1,178	1,155	1,175	1,226
Minnesota	1,000	982	972	1,020	1,079
Missouri	2,267	2,234	2,182	2,243	2,482
Nebraska	1,138	1,101	1,111	1,150	1,237
North Dakota	490	517	530	547	582
South Dakota	589	606	605	632	673
South Atlantic	76,121	75,400	75,708	78,465	84,118
Delaware	88	101	108	112	118
District of Columbia	17,707	17,495	17,645	19,481	20,592
Florida	6,386	6,294	6,376	6,700	7,159
Georgia	5,018	5,055	5,143	5,395	5,780
Maryland	24,322	24,139	24,187	25,098	27,147
North Carolina	2,720	2,764	2,761	2,836	3,052
South Carolina	1,604	1,637	1,600	1,707	1,799
Virginia	17,119	16,733	16,667	15,863	17,103
West Virginia	1,157	1,182	1,221	1,273	1,368
East South Central	10,543	10,266	10,413	10,704	11,067
Alabama	5,884	5,613	5,775	5,944	6,073
Kentucky	865	863	871	890	978
Mississippi	2,475	2,436	2,402	2,436	2,530
Tennessee	1,319	1,354	1,365	1,434	1,486
West South Central	13,538	13,101	13,043	13,189	13,947
Arkansas	800	806	851	885	964
Louisiana	1,686	1,698	1,739	1,745	1,903
Oklahoma	2,802	2,790	2,821	2,857	3,031
Texas	8,250	7,807	7,632	7,702	8,049

Table 10. Federal scientists and engineers, by geographical division and state: 1998-2002

Division and state	1998	1999	2000	2001	2002
Mountain	15,920	15,759	15,894	16,418	17,595
Arizona	1,941	1,936	1,956	2,004	2,203
Colorado	5,193	5,076	5,150	5,273	5,587
Idaho	1,220	1,231	1,223	1,295	1,356
Montana	1,130	1,121	1,139	1,237	1,343
Nevada	960	966	961	984	1,040
New Mexico	2,862	2,843	2,777	2,836	2,959
Utah	1,981	1,956	2,049	2,100	2,367
Wyoming	633	630	639	689	740
Pacific	27,667	26,909	26,877	27,676	29,902
Alaska	1,436	1,426	1,500	1,563	1,685
California	16,402	15,857	15,574	15,863	17,146
Hawaii	2,111	2,085	2,136	2,285	2,595
Oregon	2,607	2,583	2,562	2,538	2,699
Washington	5,111	4,958	5,105	5,427	5,777
Other or unknown	5,348	5,343	5,486	5,809	6,143

SOURCE: National Science Foundation tabulations from Office of Personnel Management's Central Personnel Data Files.

Table 11. Federal scientists and engineers, by major occupational group and age: 1998-2002

Major occupational group and age ¹	1998	1999	2000	2001	2002
All occupations	189,713	186,891	187,396	193,448	206,182
Under 35 years	29,447	26,094	24,487	25,623	29,318
35 - 39 years	33,630	32,220	30,447	28,609	27,532
40 - 44 years	32,246	32,820	33,803	35,289	37,361
45 - 49 years	32,516	32,217	32,632	33,825	35,842
50 - 54 years	30,876	31,604	32,771	33,569	34,932
55 - 59 years	19,296	19,872	20,639	22,795	25,568
60 - 64 years	8,372	8,642	8,963	9,745	11,140
65 years and over	3,330	3,422	3,654	3,992	4,485
All scientists	103,483	103,301	104,790	110,291	120,824
Under 35 years	14,689	13,804	13,717	14,972	17,548
35 - 39 years	14,802	14,425	14,140	14,005	14,457
40 - 44 years	18,125	17,480	17,127	17,532	18,758
45 - 49 years	20,397	20,405	20,502	21,036	22,183
50 - 54 years	18,471	19,160	20,247	21,307	22,872
55 - 59 years	10,991	11,640	12,348	13,883	16,046
60 - 64 years	4,340	4,635	4,853	5,487	6,559
65 years and over	1,668	1,752	1,856	2,069	2,400
Computer and mathematical scientists	28,073	27,963	28,339	31,525	39,223
Under 35 years	3,669	3,131	2,930	3,366	4,789
35 - 39 years	4,439	4,423	4,281	4,416	4,928
40 - 44 years	4,809	4,731	4,800	5,295	6,650
45 - 49 years	5,652	5,589	5,597	6,078	7,335
50 - 54 years	5,280	5,572	5,909	6,569	7,796
55 - 59 years	2,880	3,091	3,353	4,010	5,316
60 - 64 years	1,051	1,114	1,145	1,385	1,873
65 years and over	293	312	324	406	536
Life scientists	28,600	28,847	29,525	30,699	32,405
Under 35 years	3,875	3,741	3,778	4,101	4,734
35 - 39 years	4,194	4,020	3,974	3,865	3,924
40 - 44 years	5,651	5,380	5,152	5,092	5,071
45 - 49 years	6,303	6,397	6,512	6,575	6,504
50 - 54 years	4,855	5,237	5,699	6,010	6,420
55 - 59 years	2,485	2,729	2,979	3,451	3,887
60 - 64 years	881	961	1,045	1,181	1,357
65 years and over	356	382	386	424	508

Table 11. Federal scientists and engineers, by major occupational group and age: 1998-2002

Major occupational group and age	1998	1999	2000	2001	2002
Physical scientists	23,927	23,639	23,442	23,561	23,851
Under 35 years	3,011	2,800	2,622	2,595	2,720
35 - 39 years	3,116	2,919	2,804	2,654	2,527
40 - 44 years	4,036	3,929	3,800	3,714	3,626
45 - 49 years	4,190	4,211	4,264	4,314	4,320
50 - 54 years	4,135	4,171	4,258	4,298	4,268
55 - 59 years	3,243	3,299	3,263	3,358	3,485
60 - 64 years	1,516	1,612	1,671	1,798	1,990
65 years and over	680	698	760	830	915
Social scientists	22,883	22,852	23,484	24,506	25,345
Under 35 years	4,134	4,132	4,387	4,910	5,305
35 - 39 years	3,053	3,063	3,081	3,070	3,078
40 - 44 years	3,629	3,440	3,375	3,431	3,411
45 - 49 years	4,252	4,208	4,129	4,069	4,024
50 - 54 years	4,201	4,180	4,381	4,430	4,388
55 - 59 years	2,383	2,521	2,753	3,064	3,358
60 - 64 years	892	948	992	1,123	1,339
65 years and over	339	360	386	409	441
All engineers	86,230	83,590	82,606	83,157	85,358
Under 35 years	14,758	12,290	10,770	10,651	11,770
35 - 39 years	18,828	17,795	16,307	14,604	13,075
40 - 44 years	14,121	15,340	16,676	17,757	18,603
45 - 49 years	12,119	11,812	12,130	12,789	13,659
50 - 54 years	12,405	12,444	12,524	12,262	12,060
55 - 59 years	8,305	8,232	8,291	8,912	9,522
60 - 64 years	4,032	4,007	4,110	4,258	4,581
65 years and over	1,662	1,670	1,798	1,923	2,085
Aerospace engineers	7,578	7,451	7,519	7,734	8,025
Under 35 years	1,719	1,461	1,354	1,314	1,329
35 - 39 years	1,834	1,857	1,777	1,704	1,584
40 - 44 years	1,169	1,346	1,586	1,783	1,901
45 - 49 years	743	761	829	941	1,146
50 - 54 years	786	768	763	779	767
55 - 59 years	742	680	635	623	637
60 - 64 years	424	405	395	390	448
65 years and over	161	173	180	200	213

Table 11. Federal scientists and engineers, by major occupational group and age: 1998-2002

Major occupational group and age	1998	1999	2000	2001	2002
Chemical engineers	1,019	1,015	983	980	1,012
Under 35 years	197	190	177	190	229
35 - 39 years	224	204	167	140	118
40 - 44 years	206	210	225	235	224
45 - 49 years	113	122	134	130	160
50 - 54 years	112	119	100	102	102
55 - 59 years	89	94	93	101	89
60 - 64 years	51	49	56	44	59
65 years and over	27	27	31	38	31
Civil engineers	11,058	10,650	10,418	10,512	10,668
Under 35 years	1,528	1,356	1,253	1,324	1,457
35 - 39 years	1,699	1,456	1,290	1,189	1,097
40 - 44 years	2,087	2,123	2,055	1,949	1,859
45 - 49 years	2,044	1,946	2,013	2,068	2,085
50 - 54 years	1,893	1,953	1,950	1,936	1,947
55 - 59 years	1,136	1,126	1,138	1,281	1,371
60 - 64 years	502	506	509	532	596
65 years and over	169	184	210	233	255
Electrical, electronics, and computer engineers	27,449	26,430	25,771	25,953	26,703
Under 35 years	5,516	4,361	3,481	3,334	3,751
35 - 39 years	6,832	6,606	6,145	5,548	4,916
40 - 44 years	4,195	4,604	5,151	5,696	6,194
45 - 49 years	3,511	3,464	3,483	3,710	3,920
50 - 54 years	3,521	3,510	3,547	3,440	3,373
55 - 59 years	2,342	2,345	2,344	2,475	2,700
60 - 64 years	1,061	1,074	1,115	1,212	1,273
65 years and over	471	466	505	537	575
Industrial engineers	1,981	1,818	1,695	1,644	1,706
Under 35 years	366	269	222	220	268
35 - 39 years	405	373	329	275	244
40 - 44 years	315	335	315	334	347
45 - 49 years	260	248	239	239	252
50 - 54 years	330	311	300	267	258
55 - 59 years	169	162	172	191	212
60 - 64 years	103	87	78	76	82
65 years and over	33	33	40	42	43

Table 11. Federal scientists and engineers, by major occupational group and age: 1998-2002

Major occupational group and age	1998	1999	2000	2001	2002
Mechanical engineers	9,151	8,931	8,696	8,826	9,314
Under 35 years	1,855	1,667	1,572	1,756	2,078
35 - 39 years	2,322	2,145	1,840	1,551	1,376
40 - 44 years	1,494	1,650	1,809	1,954	2,051
45 - 49 years	1,096	1,105	1,103	1,197	1,325
50 - 54 years	1,146	1,109	1,074	1,028	1,011
55 - 59 years	711	723	757	797	876
60 - 64 years	370	371	362	371	403
65 years and over	157	161	179	172	193
Other engineers	27,994	27,295	27,524	27,508	27,930
Under 35 years	3,577	2,986	2,711	2,513	2,658
35 - 39 years	5,512	5,154	4,759	4,197	3,740
40 - 44 years	4,655	5,072	5,535	5,806	6,027
45 - 49 years	4,352	4,166	4,329	4,504	4,771
50 - 54 years	4,617	4,674	4,790	4,710	4,602
55 - 59 years	3,116	3,102	3,152	3,444	3,637
60 - 64 years	1,521	1,515	1,595	1,633	1,720
65 years and over	644	626	653	701	775

¹ Age was not reported for one individual in 2001 and four individuals in 2002.

SOURCE: National Science Foundation tabulations from Office of Personnel Management's Central Personnel Data Files.

Table 12. Federal scientists and engineers, by primary work activity and age: 1998-2002

Primary work activity and age ¹	1998	1999	2000	2001	2002
All activities	189,713	186,891	187,396	193,448	206,182
Under 35 years	29,447	26,094	24,487	25,623	29,318
35 - 39 years	33,630	32,220	30,447	28,609	27,532
40 - 44 years	32,246	32,820	33,803	35,289	37,361
45 - 49 years	32,516	32,217	32,632	33,825	35,842
50 - 54 years	30,876	31,604	32,771	33,569	34,932
55 - 59 years	19,296	19,872	20,639	22,795	25,568
60 - 64 years	8,372	8,642	8,963	9,745	11,140
65 years and over	3,330	3,422	3,654	3,992	4,485
Clinical practice, counseling, and ancillary medical services	3,991	4,320	4,487	4,505	4,511
Under 35 years	371	603	712	722	732
35 - 39 years	459	461	449	407	370
40 - 44 years	648	659	616	565	525
45 - 49 years	795	769	788	758	734
50 - 54 years	901	930	975	968	920
55 - 59 years	516	565	620	720	801
60 - 64 years	213	238	234	264	321
65 years and over	88	95	93	101	108
Construction	4,167	3,884	3,840	3,877	3,917
Under 35 years	566	445	403	393	401
35 - 39 years	708	582	504	465	444
40 - 44 years	741	779	795	782	748
45 - 49 years	736	674	669	727	736
50 - 54 years	696	697	709	679	691
55 - 59 years	418	407	453	504	543
60 - 64 years	216	215	207	216	231
65 years and over	86	85	100	111	122
Data collection, processing, and analysis	14,159	13,202	13,328	13,700	13,905
Under 35 years	3,259	2,720	2,698	2,832	2,941
35 - 39 years	2,220	2,079	2,047	1,994	1,904
40 - 44 years	2,306	2,130	2,079	2,111	2,136
45 - 49 years	2,424	2,314	2,356	2,325	2,283
50 - 54 years	2,078	2,040	2,137	2,254	2,263
55 - 59 years	1,217	1,250	1,321	1,399	1,505
60 - 64 years	481	490	493	591	656
65 years and over	174	179	197	194	217

Table 12. Federal scientists and engineers, by primary work activity and age: 1998-2002

Primary work activity and age	1998	1999	2000	2001	2002
Design	11,447	10,516	10,663	10,639	10,859
Under 35 years	1,917	1,549	1,439	1,444	1,676
35 - 39 years	2,329	2,033	1,841	1,667	1,498
40 - 44 years	1,997	2,022	2,172	2,177	2,176
45 - 49 years	1,802	1,609	1,747	1,785	1,824
50 - 54 years	1,719	1,671	1,734	1,713	1,653
55 - 59 years	969	966	1,028	1,132	1,255
60 - 64 years	509	463	490	486	532
65 years and over	205	203	212	235	245
Development	26,822	25,960	25,818	26,223	26,949
Under 35 years	4,823	4,002	3,624	3,830	4,174
35 - 39 years	6,196	6,017	5,577	4,953	4,454
40 - 44 years	4,297	4,604	5,192	5,674	6,082
45 - 49 years	3,487	3,478	3,603	3,804	4,052
50 - 54 years	3,594	3,523	3,452	3,407	3,412
55 - 59 years	2,748	2,632	2,564	2,642	2,704
60 - 64 years	1,210	1,240	1,294	1,380	1,482
65 years and over	467	464	512	533	587
Installation, operations, and maintenance	9,288	8,701	8,746	8,771	9,110
Under 35 years	1,664	1,367	1,133	1,131	1,337
35 - 39 years	2,191	1,929	1,802	1,619	1,472
40 - 44 years	1,653	1,741	1,911	1,996	2,070
45 - 49 years	1,281	1,252	1,365	1,442	1,504
50 - 54 years	1,285	1,231	1,272	1,209	1,203
55 - 59 years	751	721	792	875	963
60 - 64 years	336	334	333	357	400
65 years and over	127	126	138	141	161
Management	11,018	10,647	10,619	10,658	10,551
Under 35 years	591	472	419	381	323
35 - 39 years	1,342	1,261	1,156	1,065	945
40 - 44 years	1,510	1,530	1,654	1,755	1,834
45 - 49 years	2,014	1,909	1,905	1,918	1,897
50 - 54 years	2,566	2,479	2,514	2,368	2,249
55 - 59 years	1,894	1,901	1,840	1,968	2,034
60 - 64 years	822	798	835	890	933
65 years and over	279	297	296	313	336

Table 12. Federal scientists and engineers, by primary work activity and age: 1998-2002

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Primary work activity and age	1998	1999	2000	2001	2002
Natural resources operations	13,645	13,768	14,004	14,502	15,319
Under 35 years	1,811	1,707	1,663	1,893	2,277
35 - 39 years	2,127	2,024	1,899	1,785	1,750
40 - 44 years	2,961	2,827	2,682	2,573	2,496
45 - 49 years	3,273	3,275	3,349	3,356	3,326
50 - 54 years	2,316	2,598	2,852	3,057	3,270
55 - 59 years	882	1,018	1,207	1,447	1,725
60 - 64 years	217	262	293	330	390
65 years and over	58	57	59	61	85
Planning	5,847	4,949	4,858	4,688	4,630
Under 35 years	747	567	524	435	454
35 - 39 years	815	607	581	512	466
40 - 44 years	1,073	848	791	750	720
45 - 49 years	1,140	963	931	897	875
50 - 54 years	1,127	1,017	1,041	1,013	949
55 - 59 years	629	620	649	688	741
60 - 64 years	231	246	258	294	319
65 years and over	85	81	83	99	106
Production	3,920	3,477	3,372	3,226	2,966
Under 35 years	489	329	271	251	214
35 - 39 years	949	789	657	513	384
40 - 44 years	655	672	729	728	689
45 - 49 years	550	483	477	505	501
50 - 54 years	584	546	548	523	465
55 - 59 years	347	319	365	393	404
60 - 64 years	211	209	196	185	192
65 years and over	135	130	129	128	117
Regulatory enforcement and licensing	6,069	5,920	5,941	5,910	6,329
Under 35 years	832	738	662	598	725
35 - 39 years	1,005	953	874	789	767
40 - 44 years	1,028	1,028	1,063	1,050	1,095
45 - 49 years	1,050	991	988	1,017	1,066
50 - 54 years	963	1,015	1,071	1,090	1,123
55 - 59 years	644	653	704	745	839
60 - 64 years	354	351	369	393	468
65 years and over	193	191	210	228	246

Table 12. Federal scientists and engineers, by primary work activity and age: 1998-2002

Primary work activity and age	1998	1999	2000	2001	2002
Research	21,380	21,411	21,704	21,964	20,873
Under 35 years	2,853	2,684	2,586	2,590	2,475
35 - 39 years	3,127	3,009	2,958	2,900	2,412
40 - 44 years	3,656	3,582	3,653	3,568	3,256
45 - 49 years	3,625	3,728	3,781	3,892	3,711
50 - 54 years	3,379	3,428	3,612	3,633	3,529
55 - 59 years	2,698	2,807	2,805	2,916	2,889
60 - 64 years	1,395	1,466	1,541	1,622	1,701
65 years and over	647	707	768	843	900
Research contract and grant administration	1,053	1,016	960	1,042	1,051
Under 35 years	89	78	64	74	80
35 - 39 years	88	95	97	93	83
40 - 44 years	121	110	94	116	115
45 - 49 years	161	136	132	145	147
50 - 54 years	213	213	192	197	196
55 - 59 years	222	205	195	224	203
60 - 64 years	109	130	135	134	165
65 years and over	50	49	51	59	62
Scientific and technical information	2,951	2,965	3,245	3,454	3,675
Under 35 years	551	491	515	556	630
35 - 39 years	539	511	528	532	503
40 - 44 years	536	513	569	626	661
45 - 49 years	483	538	615	637	694
50 - 54 years	411	442	483	535	572
55 - 59 years	286	307	347	367	379
60 - 64 years	100	111	124	140	166
65 years and over	45	52	64	61	70
Standards and specifications	1,195	1,206	1,183	1,080	1,186
Under 35 years	155	134	102	77	106
35 - 39 years	222	215	204	177	154
40 - 44 years	181	195	196	197	242
45 - 49 years	192	198	211	179	188
50 - 54 years	187	200	215	210	216
55 - 59 years	136	146	141	133	147
60 - 64 years	84	81	76	67	83
65 years and over	38	37	38	40	50

Table 12. Federal scientists and engineers, by primary work activity and age: 1998-2002

Primary work activity and age	1998	1999	2000	2001	2002
Teaching and training	369	356	377	373	377
Under 35 years	22	16	27	21	21
35 - 39 years	46	47	39	30	31
40 - 44 years	62	55	55	60	57
45 - 49 years	78	71	72	67	69
50 - 54 years	79	84	88	84	69
55 - 59 years	43	47	56	62	76
60 - 64 years	21	21	26	33	39
65 years and over	18	15	14	16	15
Technical assistance and consulting	4,575	4,488	4,460	4,537	4,381
Under 35 years	525	463	389	411	375
35 - 39 years	669	611	611	553	479
40 - 44 years	714	713	701	734	705
45 - 49 years	879	841	810	798	742
50 - 54 years	865	902	950	957	920
55 - 59 years	579	580	626	667	721
60 - 64 years	240	271	252	281	297
65 years and over	104	107	121	136	142
Test and evaluation	8,495	8,051	8,292	8,443	9,053
Under 35 years	1,791	1,510	1,327	1,324	1,679
35 - 39 years	2,053	1,958	1,964	1,763	1,646
40 - 44 years	1,339	1,425	1,604	1,777	1,924
45 - 49 years	1,093	1,047	1,136	1,209	1,319
50 - 54 years	1,096	1,033	1,147	1,138	1,132
55 - 59 years	682	661	687	759	827
60 - 64 years	313	294	299	325	361
65 years and over	128	123	128	148	165
Other, not elsewhere classified	10,489	11,152	11,844	12,819	15,580
Under 35 years	2,321	2,269	2,329	2,577	3,206
35 - 39 years	2,038	2,196	2,241	2,222	2,596
40 - 44 years	1,739	1,923	2,124	2,424	2,974
45 - 49 years	1,503	1,634	1,740	1,945	2,462
50 - 54 years	1,521	1,646	1,797	1,801	1,963
55 - 59 years	909	982	1,037	1,211	1,506
60 - 64 years	326	373	436	461	627
65 years and over	132	129	140	178	246

Table 12. Federal scientists and engineers, by primary work activity and age: 1998-2002

Primary work activity and age	1998	1999	2000	2001	2002
Activity unknown	28,833	30,902	29,655	33,037	40,960
Under 35 years	4,070	3,950	3,600	4,083	5,492
35 - 39 years	4,507	4,843	4,418	4,570	5,174
40 - 44 years	5,029	5,464	5,123	5,626	6,856
45 - 49 years	5,950	6,307	5,957	6,419	7,712
50 - 54 years	5,296	5,909	5,982	6,733	8,137
55 - 59 years	2,726	3,085	3,202	3,943	5,306
60 - 64 years	984	1,049	1,072	1,296	1,777
65 years and over	271	295	301	367	505

¹ Age was not reported for one individual in 2001 and four individuals in 2002.

SOURCE: National Science Foundation tabulations from Office of Personnel Management's Central Personnel Data Files.

Table 13. Female Federal scientists and engineers, by primary work activity and age: 1998-2002

Primary work activity and age	1998	1999	2000	2001	2002
All activities	38,257	38,571	39,788	42,508	47,216
Under 35 years	9,504	8,746	8,578	9,120	10,493
35 - 39 years	8,470	8,285	8,031	7,758	7,607
40 - 44 years	7,461	7,636	7,949	8,550	9,383
45 - 49 years	5,947	6,345	6,833	7,495	8,412
50 - 54 years	3,907	4,269	4,759	5,360	6,168
55 - 59 years	1,970	2,167	2,428	2,825	3,456
60 - 64 years	724	806	873	1,040	1,283
65 years and over	274	317	337	360	414
Clinical practice, counseling, and ancillary medical services	1,502	1,710	1,817	1,876	1,893
Under 35 years	212	380	443	463	460
35 - 39 years	252	252	259	224	197
40 - 44 years	314	306	303	289	264
45 - 49 years	304	319	325	339	344
50 - 54 years	217	234	245	286	296
55 - 59 years	124	132	150	173	212
60 - 64 years	58	62	66	78	95
65 years and over	21	25	26	24	25
Construction	373	341	344	374	379
Under 35 years	135	112	96	101	101
35 - 39 years	113	94	94	96	86
40 - 44 years	67	71	78	87	88
45 - 49 years	27	30	35	47	56
50 - 54 years	21	23	26	26	27
55 - 59 years	7	7	10	12	13
60 - 64 years	1	2	3	4	6
65 years and over	2	2	2	1	2
Data collection, processing, and analysis	3,627	3,357	3,474	3,705	3,796
Under 35 years	1,174	974	1,004	1,112	1,158
35 - 39 years	632	585	584	585	562
40 - 44 years	644	600	566	588	582
45 - 49 years	544	532	594	598	599
50 - 54 years	353	358	386	447	489
55 - 59 years	193	208	229	243	255
60 - 64 years	60	71	78	101	116
65 years and over	27	29	33	31	35

Table 13. Female Federal scientists and engineers, by primary work activity and age: 1998-2002

Primary work activity and age	1998	1999	2000	2001	2002
Design	1,067	1,048	1,065	1,093	1,177
Under 35 years	384	321	294	298	344
35 - 39 years	336	314	293	268	237
40 - 44 years	174	226	258	276	307
45 - 49 years	102	103	129	146	158
50 - 54 years	44	53	57	68	86
55 - 59 years	12	17	18	24	32
60 - 64 years	10	6	7	7	7
65 years and over	5	8	9	6	6
Development	3,650	3,549	3,602	3,771	3,997
Under 35 years	1,101	888	820	877	964
35 - 39 years	1,026	1,026	992	918	853
40 - 44 years	641	675	767	851	943
45 - 49 years	412	440	480	522	546
50 - 54 years	264	288	312	333	379
55 - 59 years	152	163	157	189	204
60 - 64 years	38	53	56	57	85
65 years and over	16	16	18	24	23
Installation, operations, and maintenance	802	785	791	865	922
Under 35 years	265	247	218	219	260
35 - 39 years	261	232	230	233	206
40 - 44 years	179	192	190	237	248
45 - 49 years	58	76	102	116	139
50 - 54 years	24	23	31	40	48
55 - 59 years	11	9	15	15	14
60 - 64 years	4	6	5	4	6
65 years and over	0	0	0	1	1
Management	1,377	1,438	1,534	1,634	1,672
Under 35 years	198	169	176	175	143
35 - 39 years	324	321	312	296	273
40 - 44 years	292	313	347	401	399
45 - 49 years	268	295	312	329	362
50 - 54 years	163	189	220	241	267
55 - 59 years	92	99	116	130	153
60 - 64 years	31	39	37	46	53
65 years and over	9	13	14	16	22

Table 13. Female Federal scientists and engineers, by primary work activity and age: 1998-2002

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Primary work activity and age	1998	1999	2000	2001	2002
Natural resources operations	2,907	3,004	3,155	3,378	3,697
Under 35 years	746	721	711	806	933
35 - 39 years	756	720	668	615	588
40 - 44 years	815	840	863	847	854
45 - 49 years	418	502	619	710	822
50 - 54 years	125	162	217	299	369
55 - 59 years	31	39	57	79	103
60 - 64 years	11	14	17	18	24
65 years and over	5	6	3	4	4
Planning	1,187	963	967	935	931
Under 35 years	248	188	187	157	166
35 - 39 years	262	185	167	151	124
40 - 44 years	266	217	217	210	188
45 - 49 years	194	175	182	193	207
50 - 54 years	118	108	124	132	130
55 - 59 years	68	55	57	61	80
60 - 64 years	24	28	29	26	31
65 years and over	7	7	4	5	5
Production	344	289	290	287	277
Under 35 years	99	72	63	52	44
35 - 39 years	126	91	82	72	58
40 - 44 years	70	72	78	88	81
45 - 49 years	30	28	37	41	52
50 - 54 years	13	19	21	23	25
55 - 59 years	2	2	6	9	14
60 - 64 years	3	4	3	2	2
65 years and over	1	1	0	0	1
Regulatory enforcement of licensing	1,215	1,207	1,217	1,230	1,421
Under 35 years	324	298	275	248	312
35 - 39 years	292	285	278	258	258
40 - 44 years	232	235	248	250	290
45 - 49 years	163	166	171	200	225
50 - 54 years	114	121	126	139	157
55 - 59 years	56	68	80	91	114
60 - 64 years	21	21	23	29	46
65 years and over	13	13	16	15	19

Table 13. Female Federal scientists and engineers, by primary work activity and age: 1998-2002

Primary work activity and age	1998	1999	2000	2001	2002
Research	4,779	4,878	5,063	5,228	4,945
Under 35 years	1,058	1,005	987	992	975
35 - 39 years	902	903	914	907	740
40 - 44 years	938	921	950	981	891
45 - 49 years	746	807	884	960	940
50 - 54 years	573	606	655	648	644
55 - 59 years	329	380	398	430	444
60 - 64 years	164	175	183	212	207
65 years and over	69	81	92	98	104
Research contract and grant administration	265	259	244	293	307
Under 35 years	39	31	30	37	44
35 - 39 years	35	40	40	43	38
40 - 44 years	32	26	26	41	46
45 - 49 years	42	36	31	47	50
50 - 54 years	59	65	60	53	56
55 - 59 years	37	37	32	48	52
60 - 64 years	13	18	19	17	14
65 years and over	8	6	6	7	7
Scientific and technical information	769	764	815	849	975
Under 35 years	206	182	201	207	270
35 - 39 years	200	177	168	158	145
40 - 44 years	155	178	175	169	192
45 - 49 years	106	114	134	161	191
50 - 54 years	62	68	79	98	104
55 - 59 years	33	32	41	40	50
60 - 64 years	5	9	12	11	16
65 years and over	2	4	5	5	7
Standards and specifications	198	214	208	172	181
Under 35 years	47	46	40	25	33
35 - 39 years	54	52	45	45	31
40 - 44 years	43	44	44	38	49
45 - 49 years	24	32	38	29	35
50 - 54 years	14	20	20	15	18
55 - 59 years	10	15	12	10	6
60 - 64 years	5	2	6	7	7
65 years and over	1	3	3	3	2

Table 13. Female Federal scientists and engineers, by primary work activity and age: 1998-2002

Primary work activity and age	1998	1999	2000	2001	2002
Teaching and training	68	78	94	94	95
Under 35 years	6	7	14	7	9
35 - 39 years	15	17	15	14	15
40 - 44 years	18	20	20	24	18
45 - 49 years	10	15	20	20	25
50 - 54 years	8	10	14	16	12
55 - 59 years	7	5	7	7	9
60 - 64 years	3	3	3	5	6
65 years and over	1	1	1	1	1
Technical assistance and consulting	1,015	1,029	1,030	1,078	1,041
Under 35 years	213	187	152	149	137
35 - 39 years	198	195	190	178	150
40 - 44 years	169	179	185	207	213
45 - 49 years	180	182	174	181	159
50 - 54 years	149	166	187	197	191
55 - 59 years	62	68	87	100	121
60 - 64 years	28	32	31	41	47
65 years and over	16	20	24	25	23
Test and evaluation	1,196	1,160	1,181	1,225	1,417
Under 35 years	396	341	301	321	435
35 - 39 years	315	328	315	279	301
40 - 44 years	171	174	214	243	275
45 - 49 years	138	136	151	158	167
50 - 54 years	82	80	104	108	117
55 - 59 years	59	58	54	68	75
60 - 64 years	27	31	32	38	36
65 years and over	8	12	10	10	11
Other, not elsewhere classified	2,440	2,626	2,872	3,226	4,091
Under 35 years	816	792	888	992	1,246
35 - 39 years	552	610	616	635	773
40 - 44 years	432	483	535	639	811
45 - 49 years	278	348	376	454	611
50 - 54 years	196	226	263	275	327
55 - 59 years	111	114	136	162	224
60 - 64 years	38	38	43	53	78
65 years and over	17	15	15	16	21

Table 13. Female Federal scientists and engineers, by primary work activity and age: 1998-2002

Primary work activity and age	1998	1999	2000	2001	2002
Activity unknown	9,476	9,872	10,025	11,195	14,002
Under 35 years	1,837	1,785	1,678	1,882	2,459
35 - 39 years	1,819	1,858	1,769	1,783	1,972
40 - 44 years	1,809	1,864	1,885	2,084	2,644
45 - 49 years	1,903	2,009	2,039	2,244	2,724
50 - 54 years	1,308	1,450	1,612	1,916	2,426
55 - 59 years	574	659	766	934	1,281
60 - 64 years	180	192	220	284	401
65 years and over	46	55	56	68	95

SOURCE: National Science Foundation tabulations from Office of Personnel Management's Central Personnel Data Files.

Table 14. Male Federal scientists and engineers, by primary work activity and age: 1998-2002

Primary work activity and age ¹	1998	1999	2000	2001	2002
All activities	151,456	148,320	147,608	150,936	158,962
Under 35 years	19,943	17,348	15,909	16,500	18,823
35 - 39 years	25,160	23,935	22,416	20,850	19,924
40 - 44 years	24,785	25,184	25,854	26,739	27,978
45 - 49 years	26,569	25,872	25,799	26,330	27,430
50 - 54 years	26,969	27,335	28,012	28,209	28,764
55 - 59 years	17,326	17,705	18,211	19,970	22,111
60 - 64 years	7,648	7,836	8,090	8,705	9,857
65 years and over	3,056	3,105	3,317	3,632	4,071
Clinical practice, counseling, and ancillary medical services	2,489	2,610	2,670	2,629	2,618
Under 35 years	159	223	269	259	272
35 - 39 years	207	209	190	183	173
40 - 44 years	334	353	313	276	261
45 - 49 years	491	450	463	419	390
50 - 54 years	684	696	730	682	624
55 - 59 years	392	433	470	547	589
60 - 64 years	155	176	168	186	226
65 years and over	67	70	67	77	83
Construction	3,794	3,543	3,496	3,503	3,538
Under 35 years	431	333	307	292	300
35 - 39 years	595	488	410	369	358
40 - 44 years	674	708	717	695	660
45 - 49 years	709	644	634	680	680
50 - 54 years	675	674	683	653	664
55 - 59 years	411	400	443	492	530
60 - 64 years	215	213	204	212	225
65 years and over	84	83	98	110	120
Data collection, processing, and analysis	10,532	9,845	9,854	9,995	10,109
Under 35 years	2,085	1,746	1,694	1,720	1,783
35 - 39 years	1,588	1,494	1,463	1,409	1,342
40 - 44 years	1,662	1,530	1,513	1,523	1,554
45 - 49 years	1,880	1,782	1,762	1,727	1,684
50 - 54 years	1,725	1,682	1,751	1,807	1,774
55 - 59 years	1,024	1,042	1,092	1,156	1,250
60 - 64 years	421	419	415	490	540
65 years and over	147	150	164	163	182

Table 14. Male Federal scientists and engineers, by primary work activity and age: 1998-2002

Primary work activity and age	1998	1999	2000	2001	2002
Design	10,380	9,468	9,598	9,544	9,679
Under 35 years	1,533	1,228	1,145	1,145	1,330
35 - 39 years	1,993	1,719	1,548	1,398	1,260
40 - 44 years	1,823	1,796	1,914	1,901	1,869
45 - 49 years	1,700	1,506	1,618	1,639	1,666
50 - 54 years	1,675	1,618	1,677	1,645	1,567
55 - 59 years	957	949	1,010	1,108	1,223
60 - 64 years	499	457	483	479	525
65 years and over	200	195	203	229	239
Development	23,172	22,411	22,216	22,452	22,952
Under 35 years	3,722	3,114	2,804	2,953	3,210
35 - 39 years	5,170	4,991	4,585	4,035	3,601
40 - 44 years	3,656	3,929	4,425	4,823	5,139
45 - 49 years	3,075	3,038	3,123	3,282	3,506
50 - 54 years	3,330	3,235	3,140	3,074	3,033
55 - 59 years	2,596	2,469	2,407	2,453	2,500
60 - 64 years	1,172	1,187	1,238	1,323	1,397
65 years and over	451	448	494	509	564
Installation, operations, and maintenance	8,486	7,916	7,955	7,905	8,188
Under 35 years	1,399	1,120	915	911	1,077
35 - 39 years	1,930	1,697	1,572	1,386	1,266
40 - 44 years	1,474	1,549	1,721	1,759	1,822
45 - 49 years	1,223	1,176	1,263	1,326	1,365
50 - 54 years	1,261	1,208	1,241	1,169	1,155
55 - 59 years	740	712	777	860	949
60 - 64 years	332	328	328	353	394
65 years and over	127	126	138	140	160
Management	9,641	9,209	9,085	9,024	8,879
Under 35 years	393	303	243	206	180
35 - 39 years	1,018	940	844	769	672
40 - 44 years	1,218	1,217	1,307	1,354	1,435
45 - 49 years	1,746	1,614	1,593	1,589	1,535
50 - 54 years	2,403	2,290	2,294	2,127	1,982
55 - 59 years	1,802	1,802	1,724	1,838	1,881
60 - 64 years	791	759	798	844	880
65 years and over	270	284	282	297	314

Table 14. Male Federal scientists and engineers, by primary work activity and age: 1998-2002

Primary work activity and age	1998	1999	2000	2001	2002
Natural resources operations	10,738	10,764	10,849	11,124	11,622
Under 35 years	1,065	986	952	1,087	1,344
35 - 39 years	1,371	1,304	1,231	1,170	1,162
40 - 44 years	2,146	1,987	1,819	1,726	1,642
45 - 49 years	2,855	2,773	2,730	2,646	2,504
50 - 54 years	2,191	2,436	2,635	2,758	2,901
55 - 59 years	851	979	1,150	1,368	1,622
60 - 64 years	206	248	276	312	366
65 years and over	53	51	56	57	81
Planning	4,660	3,986	3,891	3,753	3,699
Under 35 years	499	379	337	278	288
35 - 39 years	553	422	414	361	342
40 - 44 years	807	631	574	540	532
45 - 49 years	946	788	749	704	668
50 - 54 years	1,009	909	917	881	819
55 - 59 years	561	565	592	627	661
60 - 64 years	207	218	229	268	288
65 years and over	78	74	79	94	101
Production	3,576	3,188	3,082	2,939	2,689
Under 35 years	390	257	208	199	170
35 - 39 years	823	698	575	441	326
40 - 44 years	585	600	651	640	608
45 - 49 years	520	455	440	464	449
50 - 54 years	571	527	527	500	440
55 - 59 years	345	317	359	384	390
60 - 64 years	208	205	193	183	190
65 years and over	134	129	129	128	116
Regulatory enforcement of licensing	4,854	4,713	4,724	4,680	4,908
Under 35 years	508	440	387	350	413
35 - 39 years	713	668	596	531	509
40 - 44 years	796	793	815	800	805
45 - 49 years	887	825	817	817	841
50 - 54 years	849	894	945	951	966
55 - 59 years	588	585	624	654	725
60 - 64 years	333	330	346	364	422
65 years and over	180	178	194	213	227

Table 14. Male Federal scientists and engineers, by primary work activity and age: 1998-2002

Primary work activity and age	1998	1999	2000	2001	2002
Research	16,601	16,533	16,641	16,736	15,928
Under 35 years	1,795	1,679	1,599	1,598	1,500
35 - 39 years	2,225	2,106	2,044	1,993	1,672
40 - 44 years	2,718	2,661	2,703	2,587	2,365
45 - 49 years	2,879	2,921	2,897	2,932	2,771
50 - 54 years	2,806	2,822	2,957	2,985	2,885
55 - 59 years	2,369	2,427	2,407	2,486	2,445
60 - 64 years	1,231	1,291	1,358	1,410	1,494
65 years and over	578	626	676	745	796
Research contract and grant administration	788	757	716	749	744
Under 35 years	50	47	34	37	36
35 - 39 years	53	55	57	50	45
40 - 44 years	89	84	68	75	69
45 - 49 years	119	100	101	98	97
50 - 54 years	154	148	132	144	140
55 - 59 years	185	168	163	176	151
60 - 64 years	96	112	116	117	151
65 years and over	42	43	45	52	55
Scientific and technical information	2,182	2,201	2,430	2,605	2,700
Under 35 years	345	309	314	349	360
35 - 39 years	339	334	360	374	358
40 - 44 years	381	335	394	457	469
45 - 49 years	377	424	481	476	503
50 - 54 years	349	374	404	437	468
55 - 59 years	253	275	306	327	329
60 - 64 years	95	102	112	129	150
65 years and over	43	48	59	56	63
Standards and specifications	997	992	975	908	1,005
Under 35 years	108	88	62	52	73
35 - 39 years	168	163	159	132	123
40 - 44 years	138	151	152	159	193
45 - 49 years	168	166	173	150	153
50 - 54 years	173	180	195	195	198
55 - 59 years	126	131	129	123	141
60 - 64 years	79	79	70	60	76
65 years and over	37	34	35	37	48

Table 14. Male Federal scientists and engineers, by primary work activity and age: 1998-2002

Primary work activity and age	1998	1999	2000	2001	2002
Teaching and training	301	278	283	279	282
Under 35 years	16	9	13	14	12
35 - 39 years	31	30	24	16	16
40 - 44 years	44	35	35	36	39
45 - 49 years	68	56	52	47	44
50 - 54 years	71	74	74	68	57
55 - 59 years	36	42	49	55	67
60 - 64 years	18	18	23	28	33
65 years and over	17	14	13	15	14
Technical assistance and consulting	3,560	3,459	3,430	3,459	3,340
Under 35 years	312	276	237	262	238
35 - 39 years	471	416	421	375	329
40 - 44 years	545	534	516	527	492
45 - 49 years	699	659	636	617	583
50 - 54 years	716	736	763	760	729
55 - 59 years	517	512	539	567	600
60 - 64 years	212	239	221	240	250
65 years and over	88	87	97	111	119
Test and evaluation	7,299	6,891	7,111	7,218	7,635
Under 35 years	1,395	1,169	1,026	1,003	1,244
35 - 39 years	1,738	1,630	1,649	1,484	1,345
40 - 44 years	1,168	1,251	1,390	1,534	1,649
45 - 49 years	955	911	985	1,051	1,152
50 - 54 years	1,014	953	1,043	1,030	1,015
55 - 59 years	623	603	633	691	751
60 - 64 years	286	263	267	287	325
65 years and over	120	111	118	138	154
Other, not elsewhere classified	8,049	8,526	8,972	9,592	11,489
Under 35 years	1,505	1,477	1,441	1,584	1,960
35 - 39 years	1,486	1,586	1,625	1,587	1,823
40 - 44 years	1,307	1,440	1,589	1,785	2,163
45 - 49 years	1,225	1,286	1,364	1,491	1,851
50 - 54 years	1,325	1,420	1,534	1,526	1,636
55 - 59 years	798	868	901	1,049	1,282
60 - 64 years	288	335	393	408	549
65 years and over	115	114	125	162	225

Table 14. Male Federal scientists and engineers, by primary work activity and age: 1998-2002

Primary work activity and age	1998	1999	2000	2001	2002
Activity unknown	19,357	21,030	19,630	21,842	26,958
Under 35 years	2,233	2,165	1,922	2,201	3,033
35 - 39 years	2,688	2,985	2,649	2,787	3,202
40 - 44 years	3,220	3,600	3,238	3,542	4,212
45 - 49 years	4,047	4,298	3,918	4,175	4,988
50 - 54 years	3,988	4,459	4,370	4,817	5,711
55 - 59 years	2,152	2,426	2,436	3,009	4,025
60 - 64 years	804	857	852	1,012	1,376
65 years and over	225	240	245	299	410

¹ Age was not reported for one individual in 2001 and four individuals in 2002.

SOURCE: National Science Foundation tabulations from Office of Personnel Management's Central Personnel Data Files.

Table 15. Median annual salaries of Federal scientists and engineers, by major occupational group and highest degree: 1998-2002

(Dollars)

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Major occupational group and highest degree	1998	1999	2000	2001	2002
All occupations	64,146	66,856	70,382	73,177	76,077
PhD	75,891	78,975	82,931	86,198	89,995
Professional	68,196	70,469	74,643	77,002	79,855
MS/MA	66,552	69,005	72,487	75,313	78,637
BS/BA	60,426	63,135	66,508	69,209	71,857
All scientists	62,102	64,674	68,000	70,743	73,495
PhD	75,017	78,031	81,955	85,146	88,859
Professional	67,958	69,975	74,185	76,237	79,032
MS/MA	63,144	65,259	68,498	71,111	74,276
BS/BA	56,484	59,151	62,264	65,121	67,779
Computer and mathematical scientists	63,192	66,343	70,093	73,533	75,461
PhD	78,171	81,703	86,652	90,366	94,480
Professional	66,236	67,371	71,936	76,324	78,401
MS/MA	66,648	69,770	73,621	77,249	80,382
BS/BA	60,645	63,768	67,348	70,825	72,501
Life scientists	55,909	58,474	61,636	64,027	66,595
PhD	69,305	72,459	76,256	79,333	82,604
Professional	64,815	67,772	72,464	74,686	77,600
MS/MA	56,114	58,524	61,517	63,890	66,445
BS/BA	49,826	52,029	54,868	56,849	59,092
Physical scientists	67,515	70,374	74,318	77,387	80,883
PhD	80,045	83,286	87,680	91,235	95,545
Professional	74,102	76,646	81,035	85,390	86,560
MS/MA	66,232	69,253	73,174	76,071	79,282
BS/BA	58,890	61,423	64,888	67,657	70,709
Social scientists	62,860	64,587	67,168	69,189	72,321
PhD	73,768	76,408	79,636	82,576	86,134
Professional	68,453	69,856	73,576	74,272	77,872
MS/MA	63,794	64,295	66,888	68,651	71,782
BS/BA	55,797	58,478	60,808	62,888	65,834
All engineers	66,604	69,560	73,406	76,405	79,732
PhD	80,472	83,984	88,006	91,686	95,973
Professional	68,840	71,929	76,048	79,567	82,748
MS/MA	71,036	74,123	78,044	81,407	85,283
BS/BA	63,926	66,769	70,485	73,257	76,302

Table 15. Median annual salaries of Federal scientists and engineers, by major occupational group and highest degree: 1998-2002

(Dollars)

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Major occupational group and highest degree	1998	1999	2000	2001	2002
Aerospace engineers	70,080	73,040	76,731	79,818	83,934
PhD	80,416	83,441	86,913	90,343	94,894
Professional	69,349	71,978	77,871	79,498	83,466
MS/MA	72,467	75,277	79,269	82,736	87,006
BS/BA	67,198	70,153	73,587	76,361	80,346
Chemical engineers	65,427	67,927	71,646	74,466	77,086
PhD	72,070	76,153	81,208	85,052	88,884
Professional	C	C	C	C	C
MS/MA	67,379	70,141	74,088	78,073	81,591
BS/BA	62,605	64,666	67,792	69,980	72,071
Civil engineers	61,087	63,626	66,741	69,134	72,022
PhD	75,935	78,388	81,459	84,843	88,884
Professional	62,660	65,255	69,118	70,684	72,943
MS/MA	64,876	67,312	70,382	72,754	75,633
BS/BA	59,424	61,948	64,973	67,349	70,164
Electrical, electronics, and computer engineers	65,398	68,416	72,473	75,679	78,834
PhD	79,297	82,578	86,912	90,833	95,190
Professional	66,969	69,559	74,095	77,297	79,060
MS/MA	69,958	73,178	77,485	81,144	85,129
BS/BA	63,120	66,061	69,940	72,938	75,790
Industrial engineers	62,021	65,244	69,079	71,894	74,430
PhD	76,042	79,738	85,361	90,065	91,346
Professional	C	C	C	C	C
MS/MA	65,581	68,829	72,859	75,383	78,747
BS/BA	60,323	63,465	67,126	69,864	71,965
Mechanical engineers	61,821	64,314	67,843	70,289	73,055
PhD	75,287	79,056	83,174	86,561	90,984
Professional	63,182	64,407	69,659	72,799	76,023
MS/MA	65,770	68,463	72,271	75,495	79,227
BS/BA	59,986	62,389	65,776	68,003	70,453
Other engineers	70,986	74,103	77,981	81,210	84,978
PhD	84,518	88,486	92,522	96,152	100,485
Professional	72,953	76,482	79,673	84,338	89,645
MS/MA	74,985	78,224	82,005	85,427	89,538
BS/BA	67,940	70,903	74,774	77,784	81,297

KEY: C = Data suppressed to preserve confidentiality.

PhD = doctorate

Professional = signifies completion of academic requirements for selected professions such as Dentistry (D.D.S. or D.M.D), Law (LL.B. or J.D.), Medicine (M.D.), Theology (B.D.), Veterinary Medicine (D.V.M.), Chiropody or Podiatry (D.S.C.), etc.

MS/MA = master's degree

BS/BA = bachelor's degree

SOURCE: National Science Foundation tabulations from Office of Personnel Management's Central Personnel Data Files.

Table 16. Federal scientists and engineers, by agency and major occupational group: 1998-2002

Agency and major occupational group	1998	1999	2000	2001	2002
All agencies	189,713	186,891	187,396	193,448	206,182
All scientists	103,483	103,301	104,790	110,291	120,824
Computer and mathematical scientists	28,073	27,963	28,339	31,525	39,223
Life scientists	28,600	28,847	29,525	30,699	32,405
Physical scientists	23,927	23,639	23,442	23,561	23,851
Social scientists	22,883	22,852	23,484	24,506	25,345
All engineers	83,230	83,590	82,606	83,157	85,358
Aerospace engineers	7,578	7,451	7,519	7,734	8,025
Chemical engineers	1,019	1,015	983	980	1,012
Civil engineers	11,058	10,650	10,418	10,512	10,668
Electrical, electronics, and computer engineers	27,449	26,430	25,771	25,953	26,703
Industrial engineers	1,981	1,818	1,695	1,644	1,706
Mechanical engineers	9,151	8,931	8,696	8,826	9,314
Other engineers	27,994	27,295	27,524	27,508	27,930
Department of Agriculture	17,555	16,958	17,110	17,729	19,056
All scientists	15,731	15,171	15,336	15,910	17,148
Computer and mathematical scientists	1,549	1,565	1,646	1,750	2,188
Life scientists	11,065	10,693	10,823	11,249	11,950
Physical scientists	1,265	1,178	1,181	1,228	1,262
Social scientists	1,852	1,735	1,686	1,683	1,748
All engineers	1,824	1,787	1,774	1,819	1,908
Aerospace engineers	1	1	1	1	1
Chemical engineers	43	39	38	35	35
Civil engineers	1,179	1,141	1,123	1,150	1,210
Electrical, electronics, and computer engineers	79	80	75	74	76
Industrial engineers	4	4	4	4	3
Mechanical engineers	33	34	30	27	29
Other engineers	485	488	503	528	554
Department of Commerce	9,833	9,442	9,520	9,854	10,684
All scientists	8,955	8,618	8,726	9,077	9,892
Computer and mathematical scientists	2,425	2,245	2,373	2,645	3,332
Life scientists	988	1,018	1,053	1,122	1,206
Physical scientists	4,319	4,249	4,201	4,132	4,155
Social scientists	1,223	1,106	1,099	1,178	1,199
All engineers	878	824	794	777	792
Aerospace engineers	7	7	7	8	9
Chemical engineers	41	38	35	32	30
Civil engineers	54	52	52	50	49
Electrical, electronics, and computer engineers	424	409	389	372	382
Industrial engineers	11	11	10	12	15
Mechanical engineers	121	114	110	110	107
Other engineers	220	193	191	193	200
Department of Defense	85,063	82,678	81,529	83,294	89,409
All scientists	27,517	26,945	26,665	28,203	32,500
Computer and mathematical scientists	13,050	12,715	12,434	13,872	17,780
Life scientists	3,314	3,276	3,319	3,363	3,523
Physical scientists	6,423	6,300	6,133	6,146	6,238
Social scientists	4,730	4,654	4,779	4,822	4,959
All engineers	57,546	55,733	54,864	55,091	56,909
Aerospace engineers	3,407	3,328	3,277	3,329	3,434
Chemical engineers	620	632	625	644	684
Civil engineers	6,785	6,577	6,387	6,370	6,416
Electrical, electronics, and computer engineers	21,728	20,948	20,383	20,379	21,113
Industrial engineers	1,627	1,475	1,359	1,306	1,355
Mechanical engineers	8,064	7,874	7,673	7,805	8,307
Other engineers	15,315	14,899	15,160	15,258	15,600

Table 16. Federal scientists and engineers, by agency and major occupational group: 1998-2002

Agency and major occupational group	1998	1999	2000	2001	2002
Department of the Air Force	15,842	15,095	14,769	14,799	15,777
All scientists	4,924	4,755	4,676	4,875	5,622
Computer and mathematical scientists	2,344	2,210	2,163	2,335	3,064
Life scientists	314	307	297	286	292
Physical scientists	973	949	905	911	918
Social scientists	1,293	1,289	1,311	1,343	1,348
All engineers	10,918	10,340	10,093	9,924	10,155
Aerospace engineers	1,292	1,245	1,182	1,201	1,231
Chemical engineers	56	59	54	49	43
Civil engineers	379	346	331	328	305
Electrical, electronics, and computer engineers	5,012	4,729	4,552	4,451	4,551
Industrial engineers	341	285	253	249	256
Mechanical engineers	787	735	668	672	746
Other engineers	3,051	2,941	3,053	2,974	3,023
Department of the Army	29,322	28,520	28,195	28,962	30,293
All scientists	10,312	10,141	10,093	10,776	11,878
Computer and mathematical scientists	3,706	3,564	3,421	4,024	4,944
Life scientists	2,219	2,235	2,305	2,358	2,478
Physical scientists	2,317	2,301	2,251	2,279	2,323
Social scientists	2,070	2,041	2,116	2,097	2,133
All engineers	19,010	18,379	18,102	18,186	18,415
Aerospace engineers	494	469	486	511	520
Chemical engineers	307	312	321	341	358
Civil engineers	5,493	5,372	5,233	5,216	5,239
Electrical, electronics, and computer engineers	4,728	4,533	4,467	4,526	4,666
Industrial engineers	483	449	405	392	382
Mechanical engineers	2,314	2,218	2,133	2,165	2,239
Other engineers	5,191	5,026	5,057	5,035	5,011
Department of the Navy	34,695	34,133	33,491	34,320	37,609
All scientists	9,066	8,984	8,788	9,291	11,171
Computer and mathematical scientists	4,558	4,446	4,310	4,808	6,517
Life scientists	527	634	626	639	672
Physical scientists	2,934	2,878	2,800	2,782	2,826
Social scientists	1,047	1,026	1,052	1,062	1,156
All engineers	25,629	25,149	24,703	25,029	26,438
Aerospace engineers	1,505	1,503	1,503	1,510	1,579
Chemical engineers	246	250	239	243	272
Civil engineers	863	814	774	786	831
Electrical, electronics, and computer engineers	11,067	10,816	10,442	10,475	11,033
Industrial engineers	615	579	544	531	593
Mechanical engineers	4,810	4,795	4,753	4,860	5,219
Other engineers	6,523	6,392	6,448	6,624	6,911

Table 16. Federal scientists and engineers, by agency and major occupational group: 1998-2002

Agency and major occupational group	1998	1999	2000	2001	2002
Other Defense Agencies	5,204	4,930	5,074	5,213	5,730
All scientists	3,215	3,065	3,108	3,261	3,829
Computer and mathematical scientists	2,442	2,495	2,540	2,687	3,255
Life scientists	254	100	91	80	81
Physical scientists	199	172	177	174	171
Social scientists	320	298	300	320	322
All engineers	1,989	1,865	1,966	1,952	1,901
Aerospace engineers	116	111	106	107	104
Chemical engineers	11	11	11	11	11
Civil engineers	50	45	49	40	41
Electrical, electronics, and computer engineers	921	870	922	927	863
Industrial engineers	188	162	157	134	124
Mechanical engineers	153	126	119	108	103
Other engineers	550	540	602	625	655
Department of Energy	5,192	5,057	4,934	5,059	5,037
All scientists	1,932	1,896	1,883	1,983	2,015
Computer and mathematical scientists	409	396	427	473	507
Life scientists	282	271	250	252	250
Physical scientists	1,009	1,001	971	991	969
Social scientists	232	228	235	267	289
All engineers	3,260	3,161	3,051	3,076	3,022
Aerospace engineers	0	0	0	0	0
Chemical engineers	53	52	44	45	42
Civil engineers	235	216	217	210	210
Electrical, electronics, and computer engineers	561	532	517	526	543
Industrial engineers	70	62	64	60	57
Mechanical engineers	97	91	76	81	73
Other engineers	2,244	2,208	2,133	2,154	2,097
Department of Health and Human Services	8,872	9,376	9,744	10,228	10,916
All scientists	8,255	8,754	9,098	9,565	10,235
Computer and mathematical scientists	1,761	1,855	1,937	2,070	2,275
Life scientists	3,390	3,745	3,950	4,183	4,564
Physical scientists	1,922	1,955	1,953	2,003	2,099
Social scientists	1,182	1,199	1,258	1,309	1,297
All engineers	617	622	646	663	681
Aerospace engineers	0	0	0	0	0
Chemical engineers	18	19	19	18	20
Civil engineers	17	18	16	15	17
Electrical, electronics, and computer engineers	160	155	158	157	151
Industrial engineers	29	29	28	27	35
Mechanical engineers	92	91	100	101	102
Other engineers	301	310	325	345	356

Table 16. Federal scientists and engineers, by agency and major occupational group: 1998-2002

Agency and major occupational group	1998	1999	2000	2001	2002
Department of Housing and Urban Development	304	297	280	287	310
All scientists	236	227	212	209	223
Computer and mathematical scientists	123	118	109	106	104
Life scientists	17	15	13	14	25
Physical scientists	2	4	3	4	4
Social scientists	94	90	87	85	90
All engineers	68	70	68	78	87
Aerospace engineers	0	0	0	0	0
Chemical engineers	0	0	0	0	0
Civil engineers	5	4	5	6	6
Electrical, electronics, and computer engineers	0	0	0	0	0
Industrial engineers	0	0	0	0	0
Mechanical engineers	2	2	2	2	3
Other engineers	61	64	61	70	78
Department of the Interior	12,209	12,523	12,860	13,425	14,315
All scientists	10,385	10,736	11,086	11,667	12,520
Computer and mathematical scientists	778	810	812	910	1,314
Life scientists	5,350	5,621	5,858	6,219	6,578
Physical scientists	3,639	3,656	3,711	3,744	3,810
Social scientists	618	649	705	794	818
All engineers	1,824	1,787	1,774	1,758	1,795
Aerospace engineers	0	0	0	0	0
Chemical engineers	9	8	6	3	3
Civil engineers	997	992	992	992	997
Electrical, electronics, and computer engineers	164	161	155	152	160
Industrial engineers	13	13	12	10	11
Mechanical engineers	103	91	89	95	92
Other engineers	538	522	520	506	532
Department of Justice	4,151	4,256	4,452	4,617	5,019
All scientists	4,021	4,134	4,329	4,488	4,879
Computer and mathematical scientists	821	881	971	1,060	1,287
Life scientists	48	58	66	64	72
Physical scientists	300	303	303	307	337
Social scientists	2,852	2,892	2,989	3,057	3,183
All engineers	130	122	123	129	140
Aerospace engineers	0	0	0	0	0
Chemical engineers	0	0	0	0	0
Civil engineers	6	5	6	5	7
Electrical, electronics, and computer engineers	93	85	89	93	98
Industrial engineers	1	2	1	1	2
Mechanical engineers	21	20	16	15	16
Other engineers	9	10	11	15	17
Department of Labor	2,117	2,101	2,207	2,282	2,327
All scientists	1,825	1,812	1,921	1,995	2,038
Computer and mathematical scientists	405	423	454	474	528
Life scientists	1	1	1	1	1
Physical scientists	65	63	68	69	70
Social scientists	1,354	1,325	1,398	1,451	1,439

Table 16. Federal scientists and engineers, by agency and major occupational group: 1998-2002

Agency and major occupational group	1998	1999	2000	2001	2002
Department of Labor (continued)					
All engineers	292	289	286	287	289
Aerospace engineers	0	0	0	0	0
Chemical engineers	9	7	6	6	6
Civil engineers	28	27	24	29	27
Electrical, electronics, and computer engineers	42	39	36	35	39
Industrial engineers	91	92	94	94	94
Mechanical engineers	18	17	17	18	17
Other engineers	104	107	109	105	106
Department of State	3,522	4,329	4,247	4,636	4,961
All scientists	3,283	4,116	4,021	4,376	4,669
Computer and mathematical scientists	70	101	101	122	167
Life scientists	2	1	0	0	2
Physical scientists	28	52	52	60	58
Social scientists	3,183	3,962	3,868	4,194	4,442
All engineers	239	213	226	260	292
Aerospace engineers	0	0	0	0	0
Chemical engineers	0	0	0	0	0
Civil engineers	69	62	67	71	73
Electrical, electronics, and computer engineers	134	114	120	140	166
Industrial engineers	0	0	0	0	2
Mechanical engineers	11	11	12	12	11
Other engineers	25	26	27	37	40
Department of Transportation	5,508	5,420	5,498	5,839	6,169
All scientists	1,115	1,144	1,227	1,349	1,498
Computer and mathematical scientists	516	541	581	641	734
Life scientists	167	180	204	229	245
Physical scientists	81	81	80	86	83
Social scientists	351	342	362	393	436
All engineers	4,393	4,276	4,271	4,490	4,671
Aerospace engineers	534	504	524	576	629
Chemical engineers	8	8	8	7	7
Civil engineers	1,486	1,374	1,344	1,432	1,473
Electrical, electronics, and computer engineers	1,064	1,054	1,020	1,087	1,104
Industrial engineers	18	19	15	21	24
Mechanical engineers	162	171	174	178	181
Other engineers	1,121	1,146	1,186	1,189	1,253
Department of the Treasury	3,432	3,486	3,436	3,604	4,128
All scientists	2,979	3,068	3,026	3,200	3,739
Computer and mathematical scientists	2,072	2,128	2,107	2,243	2,742
Life scientists	2	3	2	4	5
Physical scientists	217	209	206	227	228
Social scientists	688	728	711	726	764
All engineers	453	418	410	404	389
Aerospace engineers	1	0	0	0	0
Chemical engineers	6	6	4	5	5
Civil engineers	3	3	4	5	5
Electrical, electronics, and computer engineers	54	40	36	28	21
Industrial engineers	23	23	25	25	24
Mechanical engineers	31	25	25	22	25
Other engineers	335	321	316	319	309

Table 16. Federal scientists and engineers, by agency and major occupational group: 1998-2002

Agency and major occupational group	1998	1999	2000	2001	2002
Department of Veterans Affairs	5,082	5,375	5,544	5,947	6,471
All scientists	4,272	4,621	4,829	5,220	5,748
Computer and mathematical scientists	1,082	1,151	1,223	1,458	1,947
Life scientists	371	384	397	391	360
Physical scientists	311	300	283	264	253
Social scientists	2,508	2,786	2,926	3,107	3,188
All engineers	810	754	715	727	723
Aerospace engineers	0	0	0	0	0
Chemical engineers	0	0	0	0	0
Civil engineers	7	7	10	11	13
Electrical, electronics, and computer engineers	33	31	29	32	29
Industrial engineers	33	31	25	25	24
Mechanical engineers	25	25	25	25	29
Other engineers	712	660	626	634	628
Environmental Protection Agency	8,858	8,768	8,675	8,587	8,598
All scientists	6,556	6,532	6,508	6,493	6,554
Computer and mathematical scientists	441	441	432	471	501
Life scientists	3,239	3,232	3,255	3,242	3,273
Physical scientists	2,749	2,733	2,695	2,656	2,660
Social scientists	127	126	126	124	120
All engineers	2,302	2,236	2,167	2,094	2,044
Aerospace engineers	0	0	0	0	0
Chemical engineers	152	147	144	136	130
Civil engineers	7	6	7	6	3
Electrical, electronics, and computer engineers	16	15	14	15	16
Industrial engineers	1	1	1	1	1
Mechanical engineers	89	87	91	91	92
Other engineers	2,037	1,980	1,910	1,845	1,802
General Services Administration	734	718	728	711	793
All scientists	338	341	368	375	450
Computer and mathematical scientists	326	329	357	364	439
Life scientists	3	3	3	4	5
Physical scientists	7	8	7	6	5
Social scientists	2	1	1	1	1
All engineers	396	377	360	336	343
Aerospace engineers	0	0	0	0	0
Chemical engineers	1	0	0	0	0
Civil engineers	84	72	70	71	65
Electrical, electronics, and computer engineers	75	66	60	55	58
Industrial engineers	20	18	18	18	19
Mechanical engineers	108	99	95	89	83
Other engineers	108	122	117	103	118
National Aeronautics and Space Administration	10,702	10,542	10,755	10,862	10,863
All scientists	1,412	1,435	1,496	1,533	1,551
Computer and mathematical scientists	336	344	357	379	426
Life scientists	77	76	74	68	60
Physical scientists	958	965	1,009	1,028	1,002
Social scientists	41	50	56	58	63

Table 16. Federal scientists and engineers, by agency and major occupational group: 1998-2002

Agency and major occupational group	1998	1999	2000	2001	2002
NASA (continued)					
All engineers	9,290	9,107	9,259	9,329	9,312
Aerospace engineers	3,605	3,590	3,686	3,801	3,926
Chemical engineers	39	41	40	33	35
Civil engineers	4	5	4	3	2
Electrical, electronics, and computer engineers	2,437	2,341	2,326	2,430	2,352
Industrial engineers	9	11	11	11	12
Mechanical engineers	94	92	76	78	75
Other engineers	3,102	3,027	3,116	2,973	2,910
National Science Foundation	303	270	252	392	407
All scientists	266	238	223	352	364
Computer and mathematical scientists	68	61	57	102	108
Life scientists	39	32	28	61	64
Physical scientists	103	93	87	126	128
Social scientists	56	52	51	63	64
All engineers	37	32	29	40	43
Aerospace engineers	0	0	0	0	0
Chemical engineers	3	3	3	5	5
Civil engineers	5	4	5	6	8
Electrical, electronics, and computer engineers	5	4	3	4	5
Industrial engineers	0	0	0	1	1
Mechanical engineers	2	2	1	1	1
Other engineers	22	19	17	23	23
Nuclear Regulatory Commission	1,563	1,527	1,534	1,582	1,699
All scientists	377	374	378	425	451
Computer and mathematical scientists	12	12	11	69	80
Life scientists	0	0	0	0	0
Physical scientists	342	340	343	331	342
Social scientists	23	22	24	25	29
All engineers	1,186	1,153	1,156	1,157	1,248
Aerospace engineers	0	0	0	0	0
Chemical engineers	14	13	9	9	8
Civil engineers	21	22	22	20	23
Electrical, electronics, and computer engineers	43	40	35	33	32
Industrial engineers	10	10	11	11	10
Mechanical engineers	36	38	37	34	33
Other engineers	1,062	1,030	1,042	1,050	1,142
US International Development Cooperation Agency	261	227	221	196	192
All scientists	254	222	218	194	189
Computer and mathematical scientists	40	26	32	33	35
Life scientists	88	82	64	56	50
Physical scientists	11	9	8	5	3
Social scientists	115	105	114	100	101
All engineers	7	5	3	2	3
Aerospace engineers	0	0	0	0	0
Chemical engineers	0	0	0	0	0
Civil engineers	0	0	0	0	0
Electrical, electronics, and computer engineers	0	0	0	0	0
Industrial engineers	0	0	0	0	0
Mechanical engineers	0	0	0	0	0
Other engineers	7	5	3	2	3

Table 16. Federal scientists and engineers, by agency and major occupational group: 1998-2002

Agency and major occupational group	1998	1999	2000	2001	2002
All other agencies	4,452	3,541	3,870	4,317	4,828
All scientists	3,774	2,917	3,240	3,677	4,161
Computer and mathematical scientists	1,789	1,821	1,918	2,283	2,729
Life scientists	157	156	165	177	172
Physical scientists	176	140	148	148	145
Social scientists	1,652	800	1,009	1,069	1,115
All engineers	678	624	630	640	667
Aerospace engineers	23	21	24	19	26
Chemical engineers	3	2	2	2	2
Civil engineers	66	63	63	60	64
Electrical, electronics, and computer engineers	337	316	326	341	358
Industrial engineers	21	17	17	17	17
Mechanical engineers	42	47	47	42	38
Other engineers	186	158	151	159	162

SOURCE: National Science Foundation tabulations from Office of Personnel Management's Central Personnel Data Files.

Table 17. Federal scientists and engineers, by race/ethnicity and age: 1998-2002

Race/ethnicity and age ¹	1998	1999	2000	2001	2002
All races/ethnicities	189,713	186,891	187,396	193,448	206,182
Under 35 years	29,447	26,094	24,487	25,623	29,318
35 - 39 years	33,630	32,220	30,447	28,609	27,532
40 - 44 years	32,246	32,820	33,803	35,289	37,361
45 - 49 years	32,516	32,217	32,632	33,825	35,842
50 - 54 years	30,876	31,604	32,771	33,569	34,932
55 - 59 years	19,296	19,872	20,639	22,795	25,568
60 - 64 years	8,372	8,642	8,963	9,745	11,140
65 years and over	3,330	3,422	3,654	3,992	4,485
American Indian/Alaskan Native	1,583	1,642	1,675	1,791	1,916
Under 35 years	257	254	249	273	295
35 - 39 years	272	265	253	261	239
40 - 44 years	292	317	298	315	350
45 - 49 years	296	290	307	319	348
50 - 54 years	251	280	302	329	339
55 - 59 years	150	168	186	196	225
60 - 64 years	48	52	62	78	97
65 years and over	17	16	18	20	23
Asian/Pacific Islander	14,028	14,110	14,353	15,171	16,763
Under 35 years	2,473	2,204	1,969	2,145	2,617
35 - 39 years	2,685	2,702	2,675	2,599	2,562
40 - 44 years	2,301	2,381	2,633	2,836	3,140
45 - 49 years	2,057	2,039	2,103	2,257	2,591
50 - 54 years	1,791	1,875	1,923	2,076	2,249
55 - 59 years	1,512	1,555	1,576	1,624	1,766
60 - 64 years	885	989	1,034	1,118	1,211
65 years and over	324	365	440	516	626
Black	10,283	10,256	10,776	11,440	12,753
Under 35 years	2,183	1,902	1,942	2,061	2,388
35 - 39 years	2,359	2,300	2,240	2,143	2,142
40 - 44 years	1,930	2,051	2,264	2,484	2,757
45 - 49 years	1,528	1,567	1,672	1,864	2,171
50 - 54 years	1,184	1,266	1,425	1,526	1,723
55 - 59 years	696	736	755	840	992
60 - 64 years	300	321	356	380	417
65 years and over	103	113	122	142	162

Table 17. Federal scientists and engineers, by race/ethnicity and age: 1998-2002

Race/ethnicity and age	1998	1999	2000	2001	2002
Hispanic	6,757	6,784	6,860	7,232	7,955
Under 35 years	1,442	1,320	1,182	1,251	1,493
35 - 39 years	1,586	1,513	1,432	1,403	1,384
40 - 44 years	1,391	1,504	1,576	1,614	1,739
45 - 49 years	966	1,002	1,106	1,247	1,421
50 - 54 years	703	742	822	868	959
55 - 59 years	410	440	471	529	605
60 - 64 years	178	182	178	205	241
65 years and over	81	81	93	114	113
White	156,945	153,899	153,597	157,642	166,533
Under 35 years	23,061	20,353	19,127	19,855	22,450
35 - 39 years	26,703	25,396	23,816	22,169	21,167
40 - 44 years	26,304	26,530	27,000	28,001	29,315
45 - 49 years	27,656	27,292	27,421	28,112	29,278
50 - 54 years	26,936	27,425	28,280	28,747	29,631
55 - 59 years	16,523	16,964	17,642	19,597	21,964
60 - 64 years	6,958	7,095	7,331	7,962	9,168
65 years and over	2,804	2,844	2,980	3,199	3,558
All other or race/ethnicity unknown	117	200	135	172	262
Under 35 years	31	61	18	38	75
35 - 39 years	25	44	31	34	38
40 - 44 years	28	37	32	39	60
45 - 49 years	13	27	23	26	33
50 - 54 years	11	16	19	23	31
55 - 59 years	5	9	9	9	16
60 - 64 years	3	3	2	2	6
65 years and over	1	3	1	1	3

¹ Age was not reported for one individual in 2001 and four individuals in 2002.

SOURCE: National Science Foundation tabulations from Office of Personnel Management's Central Personnel Data Files.

Table 18. American Indian/Alaskan Native Federal scientists and engineers, by primary work activity and age: 1998-2002

Primary work activity and age	1998	1999	2000	2001	2002
All activities	1,583	1,642	1,675	1,791	1,916
Under 35 years	257	254	249	273	295
35 - 39 years	272	265	253	261	239
40 - 44 years	292	317	298	315	350
45 - 49 years	296	290	307	319	348
50 - 54 years	251	280	302	329	339
55 - 59 years	150	168	186	196	225
60 - 64 years	48	52	62	78	97
65 years and over	17	16	18	20	23
Clinical practice, counseling, and ancillary medical services	118	119	121	122	120
Under 35 years	13	14	17	16	12
35 - 39 years	9	8	6	9	9
40 - 44 years	18	20	19	11	14
45 - 49 years	21	19	19	21	20
50 - 54 years	26	26	27	25	17
55 - 59 years	23	24	21	24	31
60 - 64 years	5	5	10	13	14
65 years and over	3	3	2	3	3
Construction	62	50	57	61	63
Under 35 years	20	10	14	14	13
35 - 39 years	13	11	7	10	10
40 - 44 years	3	6	9	11	12
45 - 49 years	10	7	5	3	8
50 - 54 years	5	6	11	10	7
55 - 59 years	7	5	6	6	6
60 - 64 years	3	4	4	6	5
65 years and over	1	1	1	1	2
Data collection, processing, and analysis	44	45	51	53	57
Under 35 years	10	9	15	15	13
35 - 39 years	7	6	6	5	7
40 - 44 years	4	8	8	11	13
45 - 49 years	14	10	7	4	6
50 - 54 years	5	7	10	12	11
55 - 59 years	2	2	3	4	5
60 - 64 years	2	2	0	0	0
65 years and over	0	1	2	2	2

Table 18. American Indian/Alaskan Native Federal scientists and engineers, by primary work activity and age: 1998-2002

Primary work activity and age	1998	1999	2000	2001	2002
Design	93	89	91	94	95
Under 35 years	17	16	20	21	16
35 - 39 years	20	16	18	16	17
40 - 44 years	18	16	12	14	17
45 - 49 years	13	16	16	13	13
50 - 54 years	14	10	9	15	16
55 - 59 years	7	10	11	9	9
60 - 64 years	2	4	4	5	4
65 years and over	2	1	1	1	3
Development	117	112	109	116	115
Under 35 years	17	16	16	17	12
35 - 39 years	31	23	20	19	12
40 - 44 years	23	29	25	28	35
45 - 49 years	14	17	18	21	25
50 - 54 years	13	13	16	13	17
55 - 59 years	14	9	8	10	7
60 - 64 years	4	5	6	7	6
65 years and over	1	0	0	1	1
Installation, operations, and maintenance	103	101	103	116	118
Under 35 years	18	20	16	23	24
35 - 39 years	19	16	17	20	19
40 - 44 years	17	21	21	22	23
45 - 49 years	16	11	14	18	18
50 - 54 years	20	17	17	16	14
55 - 59 years	7	9	9	10	13
60 - 64 years	5	6	5	4	3
65 years and over	1	1	4	3	4
Management	89	91	89	92	93
Under 35 years	9	6	8	10	8
35 - 39 years	12	15	13	14	10
40 - 44 years	14	15	16	14	15
45 - 49 years	16	13	13	14	13
50 - 54 years	21	20	16	18	18
55 - 59 years	14	18	20	17	18
60 - 64 years	2	4	3	5	11
65 years and over	1	0	0	0	0

Table 18. American Indian/Alaskan Native Federal scientists and engineers, by primary work activity and age: 1998-2002

Primary work activity and age	1998	1999	2000	2001	2002
Natural resources operations	326	348	352	366	391
Under 35 years	52	64	61	70	78
35 - 39 years	58	57	59	55	51
40 - 44 years	82	80	68	67	64
45 - 49 years	70	71	77	77	79
50 - 54 years	49	54	59	65	81
55 - 59 years	14	19	23	24	28
60 - 64 years	1	3	4	7	9
65 years and over	0	0	1	1	1
Planning	53	51	54	48	49
Under 35 years	7	5	7	5	5
35 - 39 years	5	7	8	7	4
40 - 44 years	7	10	9	6	11
45 - 49 years	14	10	10	13	11
50 - 54 years	11	10	11	11	11
55 - 59 years	7	7	7	4	5
60 - 64 years	2	2	2	2	2
65 years and over	0	0	0	0	0
Production	24	21	26	26	28
Under 35 years	2	1	1	1	1
35 - 39 years	2	3	4	3	3
40 - 44 years	8	6	6	4	4
45 - 49 years	4	3	5	7	8
50 - 54 years	7	5	5	5	5
55 - 59 years	1	3	2	3	5
60 - 64 years	0	0	3	3	2
65 years and over	0	0	0	0	0
Regulatory enforcement and licensing	36	36	33	31	36
Under 35 years	8	8	6	4	4
35 - 39 years	4	5	7	6	7
40 - 44 years	4	5	5	6	6
45 - 49 years	5	5	5	4	4
50 - 54 years	6	7	4	5	7
55 - 59 years	2	2	3	4	5
60 - 64 years	4	2	2	0	1
65 years and over	3	2	1	2	2

Table 18. American Indian/Alaskan Native Federal scientists and engineers, by primary work activity and age: 1998-2002

Primary work activity and age	1998	1999	2000	2001	2002
Research	86	100	101	101	106
Under 35 years	14	17	16	16	12
35 - 39 years	18	16	12	13	13
40 - 44 years	15	17	17	19	22
45 - 49 years	20	22	26	18	17
50 - 54 years	8	16	16	17	21
55 - 59 years	9	11	12	14	12
60 - 64 years	2	1	2	4	8
65 years and over	0	0	0	0	1
Research contract and grant administration	3	3	3	5	5
Under 35 years	0	0	0	0	0
35 - 39 years	0	0	0	0	0
40 - 44 years	0	0	0	0	0
45 - 49 years	0	0	1	2	2
50 - 54 years	3	2	1	1	1
55 - 59 years	0	1	1	2	2
60 - 64 years	0	0	0	0	0
65 years and over	0	0	0	0	0
Scientific and technical information	16	20	28	31	34
Under 35 years	4	5	8	7	10
35 - 39 years	4	3	3	8	5
40 - 44 years	5	5	5	3	5
45 - 49 years	2	4	5	8	7
50 - 54 years	0	2	5	3	5
55 - 59 years	1	0	1	1	1
60 - 64 years	0	0	0	0	0
65 years and over	0	1	1	1	1
Standards and specifications	11	7	11	13	11
Under 35 years	3	1	1	2	3
35 - 39 years	1	2	0	0	0
40 - 44 years	4	2	5	4	3
45 - 49 years	1	2	3	4	4
50 - 54 years	1	0	1	2	0
55 - 59 years	0	0	1	1	1
60 - 64 years	1	0	0	0	0
65 years and over	0	0	0	0	0

Table 18. American Indian/Alaskan Native Federal scientists and engineers, by primary work activity and age: 1998-2002

Primary work activity and age	1998	1999	2000	2001	2002
Teaching and training	1	5	4	5	3
Under 35 years	0	0	0	0	0
35 - 39 years	0	1	0	0	0
40 - 44 years	0	0	0	0	0
45 - 49 years	0	1	1	1	1
50 - 54 years	0	2	2	2	1
55 - 59 years	1	1	1	2	1
60 - 64 years	0	0	0	0	0
65 years and over	0	0	0	0	0
Technical assistance and consulting	54	49	50	54	51
Under 35 years	7	9	5	5	7
35 - 39 years	9	3	7	11	9
40 - 44 years	8	6	7	8	6
45 - 49 years	13	13	10	8	5
50 - 54 years	6	7	10	13	12
55 - 59 years	7	9	9	9	8
60 - 64 years	3	2	1	0	4
65 years and over	1	0	1	0	0
Test and evaluation	44	47	53	51	56
Under 35 years	7	7	9	6	14
35 - 39 years	11	11	9	9	7
40 - 44 years	15	12	17	12	10
45 - 49 years	6	9	9	11	15
50 - 54 years	3	4	5	8	6
55 - 59 years	2	3	4	4	3
60 - 64 years	0	0	0	1	1
65 years and over	0	1	0	0	0
Other, not elsewhere classified	87	94	99	110	121
Under 35 years	20	21	13	22	29
35 - 39 years	11	13	18	14	13
40 - 44 years	10	12	11	17	18
45 - 49 years	16	12	18	16	18
50 - 54 years	17	23	21	19	18
55 - 59 years	6	6	7	9	15
60 - 64 years	4	4	8	9	7
65 years and over	3	3	3	4	3

Table 18. American Indian/Alaskan Native Federal scientists and engineers, by primary work activity and age: 1998-2002

Primary work activity and age	1998	1999	2000	2001	2002
Activity unknown	216	254	240	296	364
Under 35 years	29	25	16	19	34
35 - 39 years	38	49	39	42	43
40 - 44 years	37	47	38	58	72
45 - 49 years	41	45	45	56	74
50 - 54 years	36	49	56	69	71
55 - 59 years	26	29	37	39	50
60 - 64 years	8	8	8	12	20
65 years and over	1	2	1	1	0

SOURCE: National Science Foundation tabulations from Office of Personnel Management's Central Personnel Data Files.

Table 19. Asian/Pacific Islander Federal scientists and engineers, by primary work activity and age: 1998-2002

Primary work activity and age ¹	1998	1999	2000	2001	2002
All activities	14,028	14,110	14,353	15,171	16,763
Under 35 years	2,473	2,204	1,969	2,145	2,617
35 - 39 years	2,685	2,702	2,675	2,599	2,562
40 - 44 years	2,301	2,381	2,633	2,836	3,140
45 - 49 years	2,057	2,039	2,103	2,257	2,591
50 - 54 years	1,791	1,875	1,923	2,076	2,249
55 - 59 years	1,512	1,555	1,576	1,624	1,766
60 - 64 years	885	989	1,034	1,118	1,211
65 years and over	324	365	440	516	626
Clinical practice, counseling, and ancillary medical services	123	138	146	146	145
Under 35 years	15	29	39	34	38
35 - 39 years	14	15	11	14	10
40 - 44 years	21	17	21	17	16
45 - 49 years	19	18	19	18	20
50 - 54 years	22	25	22	31	27
55 - 59 years	17	14	16	15	15
60 - 64 years	11	15	13	11	13
65 years and over	4	5	5	6	6
Construction	413	403	397	426	443
Under 35 years	48	40	37	41	37
35 - 39 years	58	45	37	42	43
40 - 44 years	60	73	71	72	71
45 - 49 years	57	51	58	67	71
50 - 54 years	62	58	56	62	68
55 - 59 years	73	75	70	72	83
60 - 64 years	42	45	51	47	46
65 years and over	13	16	17	23	24
Data collection, processing, and analysis	767	716	748	772	771
Under 35 years	143	120	119	146	142
35 - 39 years	114	102	117	102	86
40 - 44 years	114	94	94	97	124
45 - 49 years	127	122	130	116	101
50 - 54 years	91	97	99	115	114
55 - 59 years	96	91	91	83	86
60 - 64 years	61	65	64	79	79
65 years and over	21	25	34	34	39

Table 19. Asian/Pacific Islander Federal scientists and engineers, by primary work activity and age: 1998-2002

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Primary work activity and age	1998	1999	2000	2001	2002
Design	1,323	1,229	1,240	1,241	1,261
Under 35 years	178	134	126	138	157
35 - 39 years	241	208	215	177	158
40 - 44 years	210	215	218	229	237
45 - 49 years	186	172	181	174	181
50 - 54 years	215	199	191	189	186
55 - 59 years	168	168	160	174	165
60 - 64 years	94	93	104	107	127
65 years and over	31	40	45	53	50
Development	2,220	2,196	2,221	2,349	2,490
Under 35 years	499	429	380	406	454
35 - 39 years	532	548	521	514	482
40 - 44 years	366	386	464	502	535
45 - 49 years	304	285	290	312	338
50 - 54 years	215	230	241	258	287
55 - 59 years	164	173	158	176	187
60 - 64 years	101	112	126	130	132
65 years and over	39	33	41	51	74
Installation, operations, and maintenance	1,269	1,232	1,236	1,279	1,380
Under 35 years	299	252	212	235	293
35 - 39 years	315	304	302	284	262
40 - 44 years	223	233	257	262	285
45 - 49 years	162	171	161	190	197
50 - 54 years	131	127	140	138	153
55 - 59 years	84	86	102	104	118
60 - 64 years	48	50	51	53	52
65 years and over	7	9	11	13	20
Management	559	563	589	595	612
Under 35 years	41	36	33	31	19
35 - 39 years	72	65	65	61	56
40 - 44 years	75	75	86	81	90
45 - 49 years	111	98	94	95	106
50 - 54 years	106	113	120	120	123
55 - 59 years	88	98	110	117	121
60 - 64 years	49	56	57	62	67
65 years and over	17	22	24	28	30

Table 19. Asian/Pacific Islander Federal scientists and engineers, by primary work activity and age: 1998-2002

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Primary work activity and age	1998	1999	2000	2001	2002
Natural resources operations	211	207	219	234	250
Under 35 years	46	35	36	42	45
35 - 39 years	35	41	40	38	36
40 - 44 years	53	47	44	39	44
45 - 49 years	34	33	40	50	53
50 - 54 years	19	21	24	27	31
55 - 59 years	14	17	21	21	23
60 - 64 years	8	10	11	14	13
65 years and over	2	3	3	3	5
Planning	306	269	262	271	269
Under 35 years	52	40	32	33	42
35 - 39 years	49	38	41	36	25
40 - 44 years	43	37	37	40	38
45 - 49 years	46	40	33	37	41
50 - 54 years	51	46	49	46	47
55 - 59 years	32	35	35	37	36
60 - 64 years	26	25	27	31	23
65 years and over	7	8	8	11	17
Production	405	380	373	373	353
Under 35 years	51	36	29	31	24
35 - 39 years	84	73	69	59	50
40 - 44 years	87	87	89	83	74
45 - 49 years	56	56	51	66	67
50 - 54 years	58	54	59	52	48
55 - 59 years	39	42	42	41	43
60 - 64 years	24	28	30	31	35
65 years and over	6	4	4	10	12
Regulatory enforcement and licensing	625	650	653	652	742
Under 35 years	74	75	59	54	66
35 - 39 years	78	87	89	84	84
40 - 44 years	83	94	104	99	114
45 - 49 years	85	78	83	87	105
50 - 54 years	102	104	90	94	110
55 - 59 years	102	99	106	96	111
60 - 64 years	68	75	72	81	92
65 years and over	33	38	50	57	60

Table 19. Asian/Pacific Islander Federal scientists and engineers, by primary work activity and age: 1998-2002

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Primary work activity and age	1998	1999	2000	2001	2002
Research	1,922	2,028	2,185	2,347	2,015
Under 35 years	258	277	256	279	225
35 - 39 years	308	335	372	400	242
40 - 44 years	349	341	388	420	332
45 - 49 years	261	277	313	376	369
50 - 54 years	247	270	296	291	271
55 - 59 years	254	262	258	258	246
60 - 64 years	172	184	194	201	193
65 years and over	73	82	108	122	137
Research contract and grant administration	100	96	89	96	105
Under 35 years	9	7	3	2	8
35 - 39 years	6	8	7	9	7
40 - 44 years	9	11	12	14	11
45 - 49 years	10	6	5	7	13
50 - 54 years	18	18	13	11	8
55 - 59 years	28	22	22	26	23
60 - 64 years	13	18	20	22	29
65 years and over	7	6	7	5	6
Scientific and technical information	204	196	220	243	243
Under 35 years	58	44	45	45	49
35 - 39 years	32	35	38	47	39
40 - 44 years	23	23	33	43	37
45 - 49 years	23	24	28	24	31
50 - 54 years	20	22	26	37	33
55 - 59 years	32	28	28	23	23
60 - 64 years	14	15	16	17	20
65 years and over	2	5	6	7	11
Standards and specifications	112	113	116	115	125
Under 35 years	14	13	10	9	12
35 - 39 years	19	14	14	10	6
40 - 44 years	17	16	17	24	26
45 - 49 years	17	24	25	22	31
50 - 54 years	16	15	17	19	13
55 - 59 years	12	12	12	9	12
60 - 64 years	14	16	18	15	13
65 years and over	3	3	3	7	12

Table 19. Asian/Pacific Islander Federal scientists and engineers, by primary work activity and age: 1998-2002

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Primary work activity and age	1998	1999	2000	2001	2002
Teaching and training	30	27	28	31	35
Under 35 years	0	0	1	1	1
35 - 39 years	4	4	3	4	2
40 - 44 years	8	8	9	9	10
45 - 49 years	6	6	5	5	8
50 - 54 years	4	4	5	6	7
55 - 59 years	3	1	0	1	3
60 - 64 years	3	2	3	3	3
65 years and over	2	2	2	2	1
Technical assistance and consulting	244	224	226	240	229
Under 35 years	23	29	24	29	27
35 - 39 years	40	30	31	25	23
40 - 44 years	26	27	32	42	34
45 - 49 years	38	35	42	30	32
50 - 54 years	47	38	30	41	39
55 - 59 years	38	31	34	36	37
60 - 64 years	19	23	22	25	22
65 years and over	13	11	11	12	15
Test and evaluation	847	793	834	840	962
Under 35 years	184	151	125	129	175
35 - 39 years	213	213	207	179	181
40 - 44 years	133	141	171	185	210
45 - 49 years	125	104	117	119	137
50 - 54 years	82	80	93	100	116
55 - 59 years	61	54	62	64	72
60 - 64 years	35	36	38	45	48
65 years and over	14	14	21	19	23
Other, not elsewhere classified	772	809	881	980	1,645
Under 35 years	205	195	180	188	304
35 - 39 years	149	167	176	185	372
40 - 44 years	113	118	148	194	353
45 - 49 years	102	98	113	121	223
50 - 54 years	92	94	107	118	152
55 - 59 years	72	91	94	103	125
60 - 64 years	25	34	48	51	82
65 years and over	14	12	15	20	34

Table 19. Asian/Pacific Islander Federal scientists and engineers, by primary work activity and age: 1998-2002

Primary work activity and age	1998	1999	2000	2001	2002
Activity unknown	1,576	1,841	1,690	1,941	2,688
Under 35 years	276	262	223	272	499
35 - 39 years	322	370	320	329	398
40 - 44 years	288	338	338	384	499
45 - 49 years	288	341	315	341	467
50 - 54 years	193	260	245	321	416
55 - 59 years	135	156	155	168	237
60 - 64 years	58	87	69	93	122
65 years and over	16	27	25	33	50

¹ Age was not reported for one individual in 2002.

SOURCE: National Science Foundation tabulations from Office of Personnel Management's Central Personnel Data Files.

Table 20. Black Federal scientists and engineers, by primary work activity and age: 1998-2002

Primary work activity and age	1998	1999	2000	2001	2002
All activities	10,283	10,256	10,776	11,440	12,753
Under 35 years	2,183	1,902	1,942	2,061	2,388
35 - 39 years	2,359	2,300	2,240	2,143	2,142
40 - 44 years	1,930	2,051	2,264	2,484	2,757
45 - 49 years	1,528	1,567	1,672	1,864	2,171
50 - 54 years	1,184	1,266	1,425	1,526	1,723
55 - 59 years	696	736	755	840	992
60 - 64 years	300	321	356	380	417
65 years and over	103	113	122	142	162
Clinical practice, counseling, and ancillary medical services	377	411	441	422	417
Under 35 years	46	68	79	73	70
35 - 39 years	55	54	54	43	34
40 - 44 years	61	69	62	67	62
45 - 49 years	85	75	83	80	85
50 - 54 years	71	88	97	89	80
55 - 59 years	36	34	46	47	62
60 - 64 years	15	15	14	17	17
65 years and over	8	8	6	6	7
Construction	182	168	167	163	165
Under 35 years	40	32	25	29	34
35 - 39 years	47	38	38	29	23
40 - 44 years	37	43	40	40	36
45 - 49 years	15	15	18	25	31
50 - 54 years	21	20	21	15	17
55 - 59 years	12	13	16	10	9
60 - 64 years	7	4	5	11	11
65 years and over	3	3	4	4	4
Data collection, processing, and analysis	912	813	828	904	949
Under 35 years	260	177	187	218	237
35 - 39 years	151	159	151	154	147
40 - 44 years	182	158	157	162	161
45 - 49 years	138	132	131	150	163
50 - 54 years	110	112	124	128	132
55 - 59 years	49	47	49	55	74
60 - 64 years	17	22	20	29	26
65 years and over	5	6	9	8	9

Table 20. Black Federal scientists and engineers, by primary work activity and age: 1998-2002

Primary work activity and age	1998	1999	2000	2001	2002
Design	441	425	408	411	426
Under 35 years	97	85	81	72	81
35 - 39 years	116	104	93	90	81
40 - 44 years	91	93	87	98	104
45 - 49 years	50	51	55	61	64
50 - 54 years	39	43	44	41	37
55 - 59 years	32	34	33	33	38
60 - 64 years	13	12	13	14	16
65 years and over	3	3	2	2	5
Development	1,187	1,155	1,182	1,221	1,252
Under 35 years	273	234	215	238	256
35 - 39 years	358	336	309	264	224
40 - 44 years	248	254	297	323	356
45 - 49 years	115	133	150	170	186
50 - 54 years	95	89	101	104	113
55 - 59 years	67	70	64	75	71
60 - 64 years	23	30	34	39	36
65 years and over	8	9	12	8	9
Installation, operations, and maintenance	396	378	396	419	431
Under 35 years	95	78	73	81	95
35 - 39 years	136	114	97	91	79
40 - 44 years	74	94	119	128	127
45 - 49 years	38	38	47	55	63
50 - 54 years	23	26	30	30	31
55 - 59 years	25	22	22	22	20
60 - 64 years	4	5	7	11	14
65 years and over	1	1	1	1	2
Management	427	439	444	465	454
Under 35 years	43	34	30	34	25
35 - 39 years	96	100	72	61	51
40 - 44 years	69	89	105	120	121
45 - 49 years	78	68	79	90	85
50 - 54 years	55	62	72	69	80
55 - 59 years	57	56	52	61	53
60 - 64 years	24	25	31	27	31
65 years and over	5	5	3	3	8

Table 20. Black Federal scientists and engineers, by primary work activity and age: 1998-2002

Primary work activity and age	1998	1999	2000	2001	2002
Natural resources operations	451	450	448	463	459
Under 35 years	97	79	77	93	98
35 - 39 years	75	79	70	57	53
40 - 44 years	87	90	88	84	79
45 - 49 years	93	83	78	85	79
50 - 54 years	67	82	93	93	95
55 - 59 years	25	30	29	35	43
60 - 64 years	6	6	12	13	8
65 years and over	1	1	1	3	4
Planning	223	211	206	193	193
Under 35 years	34	36	30	23	18
35 - 39 years	44	42	45	36	33
40 - 44 years	41	36	36	43	42
45 - 49 years	31	35	33	36	38
50 - 54 years	41	28	31	27	29
55 - 59 years	19	22	18	14	19
60 - 64 years	10	9	11	12	10
65 years and over	3	3	2	2	4
Production	184	171	161	148	151
Under 35 years	20	15	12	20	19
35 - 39 years	67	54	42	29	22
40 - 44 years	37	44	51	45	46
45 - 49 years	26	24	20	23	25
50 - 54 years	16	15	16	12	18
55 - 59 years	11	12	13	14	17
60 - 64 years	4	4	3	1	2
65 years and over	3	3	4	4	2
Regulatory enforcement and licensing	320	308	301	306	347
Under 35 years	75	73	59	55	78
35 - 39 years	70	64	63	57	61
40 - 44 years	58	57	58	58	65
45 - 49 years	36	37	46	61	53
50 - 54 years	41	35	28	27	34
55 - 59 years	25	30	32	31	32
60 - 64 years	10	6	10	12	18
65 years and over	5	6	5	5	6

Table 20. Black Federal scientists and engineers, by primary work activity and age: 1998-2002

Primary work activity and age	1998	1999	2000	2001	2002
Research	632	660	711	709	713
Under 35 years	150	143	155	160	146
35 - 39 years	132	132	141	122	125
40 - 44 years	95	115	128	129	128
45 - 49 years	87	85	91	94	102
50 - 54 years	75	81	90	85	92
55 - 59 years	57	61	58	69	67
60 - 64 years	21	24	31	29	34
65 years and over	15	19	17	21	19
Research contract and grant administration	46	45	50	57	58
Under 35 years	3	4	5	7	8
35 - 39 years	10	10	15	9	8
40 - 44 years	7	4	6	13	16
45 - 49 years	12	12	11	9	6
50 - 54 years	3	5	6	9	10
55 - 59 years	3	4	3	6	5
60 - 64 years	5	4	4	3	3
65 years and over	3	2	0	1	2
Scientific and technical information	129	132	159	173	174
Under 35 years	42	42	38	46	44
35 - 39 years	24	25	30	21	24
40 - 44 years	27	26	35	37	33
45 - 49 years	19	14	24	30	31
50 - 54 years	9	15	16	21	25
55 - 59 years	6	6	11	12	9
60 - 64 years	1	2	2	3	4
65 years and over	1	2	3	3	4
Standards and specifications	69	73	84	67	75
Under 35 years	14	10	15	7	12
35 - 39 years	23	26	21	18	15
40 - 44 years	6	7	15	16	17
45 - 49 years	11	13	14	6	10
50 - 54 years	6	5	7	9	9
55 - 59 years	4	9	9	8	7
60 - 64 years	4	3	1	1	3
65 years and over	1	0	2	2	2

Table 20. Black Federal scientists and engineers, by primary work activity and age: 1998-2002

Primary work activity and age	1998	1999	2000	2001	2002
Teaching and training	14	17	18	17	18
Under 35 years	1	1	1	0	0
35 - 39 years	1	1	2	1	2
40 - 44 years	1	2	3	3	4
45 - 49 years	4	5	4	5	5
50 - 54 years	2	3	3	2	3
55 - 59 years	1	1	1	2	2
60 - 64 years	3	3	2	2	1
65 years and over	1	1	2	2	1
Technical assistance and consulting	354	345	358	368	363
Under 35 years	49	49	49	36	35
35 - 39 years	57	49	48	50	49
40 - 44 years	55	54	64	70	63
45 - 49 years	61	56	46	45	46
50 - 54 years	66	62	79	85	73
55 - 59 years	40	40	38	43	54
60 - 64 years	19	25	20	22	29
65 years and over	7	10	14	17	14
Test and evaluation	425	403	384	385	450
Under 35 years	116	97	74	74	117
35 - 39 years	118	109	103	87	81
40 - 44 years	72	74	84	86	92
45 - 49 years	44	51	46	64	74
50 - 54 years	26	27	33	32	38
55 - 59 years	23	21	20	20	27
60 - 64 years	23	17	16	13	13
65 years and over	3	7	8	9	8
Other, not elsewhere classified	834	816	1,043	1,182	1,326
Under 35 years	247	204	319	354	396
35 - 39 years	189	194	233	251	243
40 - 44 years	147	156	184	225	256
45 - 49 years	113	113	147	172	207
50 - 54 years	79	81	81	94	118
55 - 59 years	35	42	45	53	64
60 - 64 years	19	21	28	22	28
65 years and over	5	5	6	11	14

Table 20. Black Federal scientists and engineers, by primary work activity and age: 1998-2002

Primary work activity and age	1998	1999	2000	2001	2002
Activity unknown	2,680	2,836	2,987	3,367	4,332
Under 35 years	481	441	418	441	619
35 - 39 years	590	610	613	673	787
40 - 44 years	535	586	645	737	949
45 - 49 years	472	527	549	603	818
50 - 54 years	339	387	453	554	689
55 - 59 years	169	182	196	230	319
60 - 64 years	72	84	92	99	113
65 years and over	22	19	21	30	38

¹ Age was not reported for one individual in 2002.

SOURCE: National Science Foundation tabulations from Office of Personnel Management's Central Personnel Data Files.

Table 21. Hispanic Federal scientists and engineers, by primary work activity and age: 1998-2002

Primary work activity and age ¹	1998	1999	2000	2001	2002
All activities	6,757	6,784	6,860	7,232	7,955
Under 35 years	1,442	1,320	1,182	1,251	1,493
35 - 39 years	1,586	1,513	1,432	1,403	1,384
40 - 44 years	1,391	1,504	1,576	1,614	1,739
45 - 49 years	966	1,002	1,106	1,247	1,421
50 - 54 years	703	742	822	868	959
55 - 59 years	410	440	471	529	605
60 - 64 years	178	182	178	205	241
65 years and over	81	81	93	114	113
Clinical practice, counseling, and ancillary medical services	158	173	191	186	187
Under 35 years	20	28	35	36	37
35 - 39 years	25	21	26	18	20
40 - 44 years	29	38	29	27	19
45 - 49 years	27	32	39	32	39
50 - 54 years	26	28	33	35	32
55 - 59 years	18	19	20	23	26
60 - 64 years	9	5	3	10	9
65 years and over	4	2	6	5	5
Construction	225	208	193	185	196
Under 35 years	32	31	24	16	16
35 - 39 years	43	35	28	27	35
40 - 44 years	49	47	44	42	42
45 - 49 years	40	34	36	33	28
50 - 54 years	32	32	33	32	30
55 - 59 years	14	13	17	21	28
60 - 64 years	7	8	4	8	10
65 years and over	8	8	7	6	7
Data collection, processing, and analysis	411	391	397	425	447
Under 35 years	109	86	82	89	100
35 - 39 years	88	83	78	80	68
40 - 44 years	75	78	84	82	95
45 - 49 years	58	61	68	74	76
50 - 54 years	37	36	36	49	50
55 - 59 years	31	33	38	32	33
60 - 64 years	10	10	7	12	19
65 years and over	3	4	4	7	6

Table 21. Hispanic Federal scientists and engineers, by primary work activity and age: 1998-2002

Primary work activity and age	1998	1999	2000	2001	2002
Design	492	452	431	425	429
Under 35 years	105	79	63	61	62
35 - 39 years	124	105	87	71	72
40 - 44 years	93	94	106	113	103
45 - 49 years	64	69	70	72	74
50 - 54 years	45	44	45	48	53
55 - 59 years	28	29	30	30	30
60 - 64 years	26	24	20	16	23
65 years and over	7	8	10	14	12
Development	948	961	957	1,010	1,045
Under 35 years	235	193	172	195	196
35 - 39 years	289	300	267	234	214
40 - 44 years	191	202	233	265	293
45 - 49 years	102	116	127	139	148
50 - 54 years	67	82	81	85	94
55 - 59 years	44	43	48	54	64
60 - 64 years	14	19	22	30	27
65 years and over	6	6	7	8	9
Installation, operations, and maintenance	397	369	393	408	448
Under 35 years	99	80	66	71	86
35 - 39 years	87	79	86	79	80
40 - 44 years	102	98	105	111	117
45 - 49 years	44	49	62	67	78
50 - 54 years	41	37	42	46	48
55 - 59 years	14	18	23	21	25
60 - 64 years	8	6	4	8	9
65 years and over	2	2	5	4	5
Management	322	342	357	359	371
Under 35 years	28	30	22	16	10
35 - 39 years	55	55	57	60	58
40 - 44 years	73	83	82	81	85
45 - 49 years	59	60	66	73	83
50 - 54 years	55	55	63	64	68
55 - 59 years	33	38	46	44	50
60 - 64 years	13	15	15	13	10
65 years and over	6	6	6	8	7

Table 21. Hispanic Federal scientists and engineers, by primary work activity and age: 1998-2002

Primary work activity and age	1998	1999	2000	2001	2002
Natural resources operations	419	425	433	455	490
Under 35 years	83	90	75	87	95
35 - 39 years	96	84	87	87	88
40 - 44 years	99	100	100	91	87
45 - 49 years	86	83	82	98	105
50 - 54 years	47	50	68	67	85
55 - 59 years	7	17	20	23	27
60 - 64 years	1	1	1	2	3
65 years and over	0	0	0	0	0
Planning	225	190	178	149	144
Under 35 years	44	27	25	16	20
35 - 39 years	32	30	24	22	19
40 - 44 years	51	48	37	29	30
45 - 49 years	37	32	32	31	31
50 - 54 years	32	26	31	20	20
55 - 59 years	19	19	19	18	14
60 - 64 years	7	5	7	9	8
65 years and over	3	3	3	4	2
Production	188	157	141	139	119
Under 35 years	26	15	18	19	17
35 - 39 years	64	56	43	38	22
40 - 44 years	47	42	41	31	28
45 - 49 years	16	14	15	25	30
50 - 54 years	15	16	10	12	9
55 - 59 years	12	5	8	6	7
60 - 64 years	4	5	3	5	4
65 years and over	4	4	3	3	2
Regulatory enforcement and licensing	267	263	269	286	315
Under 35 years	68	70	62	61	82
35 - 39 years	69	60	54	61	64
40 - 44 years	43	49	61	63	62
45 - 49 years	38	36	33	38	42
50 - 54 years	21	21	29	29	27
55 - 59 years	17	14	15	19	19
60 - 64 years	7	8	10	10	13
65 years and over	4	5	5	5	6

Table 21. Hispanic Federal scientists and engineers, by primary work activity and age: 1998-2002

Primary work activity and age	1998	1999	2000	2001	2002
Research	462	466	483	528	529
Under 35 years	93	97	94	100	108
35 - 39 years	104	94	94	99	88
40 - 44 years	107	113	122	113	113
45 - 49 years	63	63	69	98	100
50 - 54 years	34	39	44	50	51
55 - 59 years	38	35	30	32	31
60 - 64 years	13	15	20	21	21
65 years and over	10	10	10	15	17
Research contract and grant administration	18	18	24	27	22
Under 35 years	4	4	2	1	2
35 - 39 years	3	5	9	7	2
40 - 44 years	2	0	0	2	5
45 - 49 years	3	3	5	3	3
50 - 54 years	3	4	5	6	5
55 - 59 years	2	1	2	5	4
60 - 64 years	0	1	1	2	1
65 years and over	1	0	0	1	0
Scientific and technical information	106	99	114	127	160
Under 35 years	29	26	24	23	35
35 - 39 years	31	22	26	26	28
40 - 44 years	17	18	25	27	33
45 - 49 years	12	14	16	19	29
50 - 54 years	11	8	10	16	17
55 - 59 years	4	8	9	10	12
60 - 64 years	1	1	2	4	4
65 years and over	1	2	2	2	2
Standards and specifications	42	41	40	35	36
Under 35 years	10	11	8	8	5
35 - 39 years	12	7	10	7	9
40 - 44 years	7	8	7	7	6
45 - 49 years	5	7	4	5	7
50 - 54 years	4	3	5	5	5
55 - 59 years	3	4	4	3	3
60 - 64 years	1	1	2	0	1
65 years and over	0	0	0	0	0

Table 21. Hispanic Federal scientists and engineers, by primary work activity and age: 1998-2002

Primary work activity and age	1998	1999	2000	2001	2002
Teaching and training	14	12	13	15	10
Under 35 years	4	3	5	4	2
35 - 39 years	1	1	0	2	1
40 - 44 years	2	2	1	3	2
45 - 49 years	2	2	3	1	0
50 - 54 years	2	1	1	2	2
55 - 59 years	3	2	1	1	0
60 - 64 years	0	1	2	1	2
65 years and over	0	0	0	1	1
Technical assistance and consulting	188	197	196	206	214
Under 35 years	39	31	21	22	20
35 - 39 years	35	34	32	34	28
40 - 44 years	36	41	38	36	44
45 - 49 years	28	33	38	39	44
50 - 54 years	23	28	30	31	27
55 - 59 years	16	16	22	30	33
60 - 64 years	6	10	11	8	12
65 years and over	5	4	4	6	6
Test and evaluation	456	459	468	480	537
Under 35 years	110	91	86	81	103
35 - 39 years	147	138	124	118	118
40 - 44 years	86	111	114	133	140
45 - 49 years	49	56	68	71	88
50 - 54 years	34	34	45	47	49
55 - 59 years	18	18	18	18	22
60 - 64 years	8	6	7	8	12
65 years and over	4	5	6	4	5
Other, not elsewhere classified	423	497	533	608	706
Under 35 years	127	144	142	169	204
35 - 39 years	97	110	119	122	130
40 - 44 years	93	120	132	132	143
45 - 49 years	41	48	63	83	117
50 - 54 years	31	38	40	52	55
55 - 59 years	24	27	27	36	40
60 - 64 years	9	10	9	11	14
65 years and over	1	0	1	3	3

Table 21. Hispanic Federal scientists and engineers, by primary work activity and age: 1998-2002

Primary work activity and age	1998	1999	2000	2001	2002
Activity unknown	996	1,064	1,049	1,179	1,550
Under 35 years	177	184	156	176	293
35 - 39 years	184	194	181	211	240
40 - 44 years	189	212	215	226	292
45 - 49 years	192	190	210	246	299
50 - 54 years	143	160	171	172	232
55 - 59 years	65	81	74	103	137
60 - 64 years	34	31	28	27	39
65 years and over	12	12	14	18	18

¹ Age was not reported for one individual in 2001.

SOURCE: National Science Foundation tabulations from Office of Personnel Management's Central Personnel Data Files.

Table 22. White Federal scientists and engineers, by primary work activity and age: 1998-2002

Primary work activity and age ¹	1998	1999	2000	2001	2002
All activities	156,945	153,899	153,597	157,642	166,533
Under 35 years	23,061	20,353	19,127	19,855	22,450
35 - 39 years	26,703	25,396	23,816	22,169	21,167
40 - 44 years	26,304	26,530	27,000	28,001	29,315
45 - 49 years	27,656	27,292	27,421	28,112	29,278
50 - 54 years	26,936	27,425	28,280	28,747	29,631
55 - 59 years	16,523	16,964	17,642	19,597	21,964
60 - 64 years	6,958	7,095	7,331	7,962	9,168
65 years and over	2,804	2,844	2,980	3,199	3,558
Clinical practice, counseling, and ancillary medical services	3,211	3,476	3,584	3,625	3,637
Under 35 years	276	464	542	563	575
35 - 39 years	355	362	351	323	296
40 - 44 years	518	514	484	442	413
45 - 49 years	643	625	628	606	569
50 - 54 years	755	762	794	787	763
55 - 59 years	422	474	517	610	667
60 - 64 years	173	198	194	213	267
65 years and over	69	77	74	81	87
Construction	3,278	3,046	3,023	3,039	3,045
Under 35 years	426	331	303	293	300
35 - 39 years	546	451	393	356	333
40 - 44 years	590	607	630	616	586
45 - 49 years	612	565	552	599	597
50 - 54 years	576	581	587	559	568
55 - 59 years	312	301	344	395	417
60 - 64 years	156	154	143	144	158
65 years and over	60	56	71	77	85
Data collection, processing, and analysis	12,010	11,220	11,289	11,530	11,656
Under 35 years	2,731	2,323	2,292	2,361	2,441
35 - 39 years	1,857	1,725	1,693	1,650	1,592
40 - 44 years	1,927	1,788	1,732	1,756	1,737
45 - 49 years	2,087	1,988	2,017	1,976	1,934
50 - 54 years	1,835	1,787	1,866	1,949	1,956
55 - 59 years	1,038	1,076	1,139	1,225	1,305
60 - 64 years	390	391	402	470	531
65 years and over	145	142	148	143	160

Table 22. White Federal scientists and engineers, by primary work activity and age: 1998-2002

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Primary work activity and age	1998	1999	2000	2001	2002
Design	9,090	8,305	8,481	8,451	8,626
Under 35 years	1,516	1,230	1,146	1,147	1,354
35 - 39 years	1,825	1,594	1,425	1,309	1,165
40 - 44 years	1,584	1,602	1,746	1,719	1,709
45 - 49 years	1,489	1,300	1,423	1,462	1,490
50 - 54 years	1,406	1,374	1,445	1,420	1,359
55 - 59 years	734	724	793	885	1,012
60 - 64 years	374	330	349	344	362
65 years and over	162	151	154	165	175
Development	22,342	21,513	21,347	21,516	22,031
Under 35 years	3,797	3,121	2,841	2,970	3,251
35 - 39 years	4,984	4,801	4,459	3,920	3,520
40 - 44 years	3,466	3,729	4,172	4,551	4,858
45 - 49 years	2,952	2,927	3,018	3,162	3,352
50 - 54 years	3,204	3,109	3,013	2,947	2,900
55 - 59 years	2,458	2,336	2,286	2,327	2,375
60 - 64 years	1,068	1,074	1,106	1,174	1,281
65 years and over	413	416	452	465	494
Installation, operations, and maintenance	7,118	6,612	6,611	6,540	6,721
Under 35 years	1,150	935	765	719	837
35 - 39 years	1,633	1,414	1,297	1,144	1,031
40 - 44 years	1,236	1,293	1,409	1,471	1,515
45 - 49 years	1,021	981	1,078	1,110	1,146
50 - 54 years	1,070	1,024	1,043	978	955
55 - 59 years	621	586	636	717	785
60 - 64 years	271	266	266	281	322
65 years and over	116	113	117	120	130
Management	9,617	9,203	9,133	9,140	9,011
Under 35 years	468	364	326	290	260
35 - 39 years	1,106	1,026	948	867	768
40 - 44 years	1,278	1,265	1,362	1,456	1,521
45 - 49 years	1,750	1,668	1,652	1,645	1,609
50 - 54 years	2,329	2,228	2,241	2,096	1,957
55 - 59 years	1,702	1,690	1,612	1,729	1,791
60 - 64 years	734	698	729	783	814
65 years and over	250	264	263	274	291

Table 22. White Federal scientists and engineers, by primary work activity and age: 1998-2002

Primary work activity and age	1998	1999	2000	2001	2002
Natural resources operations	12,235	12,334	12,550	12,980	13,726
Under 35 years	1,533	1,439	1,414	1,601	1,961
35 - 39 years	1,862	1,761	1,643	1,547	1,521
40 - 44 years	2,640	2,510	2,381	2,291	2,221
45 - 49 years	2,989	3,004	3,072	3,046	3,010
50 - 54 years	2,133	2,390	2,607	2,804	2,977
55 - 59 years	822	935	1,114	1,343	1,604
60 - 64 years	201	242	265	294	357
65 years and over	55	53	54	54	75
Planning	5,037	4,218	4,154	4,024	3,973
Under 35 years	609	453	430	357	369
35 - 39 years	685	490	463	411	385
40 - 44 years	930	717	672	632	599
45 - 49 years	1,012	844	822	780	754
50 - 54 years	992	906	918	908	842
55 - 59 years	551	536	568	614	665
60 - 64 years	186	205	211	240	276
65 years and over	72	67	70	82	83
Production	3,119	2,748	2,671	2,540	2,315
Under 35 years	390	262	211	180	153
35 - 39 years	732	603	499	384	287
40 - 44 years	476	493	542	565	537
45 - 49 years	448	386	386	384	371
50 - 54 years	488	456	458	442	385
55 - 59 years	284	257	300	329	332
60 - 64 years	179	172	157	145	149
65 years and over	122	119	118	111	101
Regulatory enforcement and licensing	4,814	4,654	4,680	4,628	4,878
Under 35 years	603	509	475	423	494
35 - 39 years	782	735	660	579	550
40 - 44 years	840	822	833	821	841
45 - 49 years	885	832	820	826	860
50 - 54 years	793	848	920	935	945
55 - 59 years	498	508	548	595	672
60 - 64 years	265	260	275	290	344
65 years and over	148	140	149	159	172

Table 22. White Federal scientists and engineers, by primary work activity and age: 1998-2002

Primary work activity and age	1998	1999	2000	2001	2002
Research	18,259	18,128	18,198	18,254	17,481
Under 35 years	2,337	2,143	2,063	2,031	1,974
35 - 39 years	2,562	2,425	2,333	2,261	1,943
40 - 44 years	3,084	2,989	2,988	2,880	2,655
45 - 49 years	3,191	3,278	3,278	3,301	3,119
50 - 54 years	3,010	3,018	3,163	3,186	3,087
55 - 59 years	2,339	2,437	2,446	2,543	2,533
60 - 64 years	1,187	1,242	1,294	1,367	1,445
65 years and over	549	596	633	685	725
Research contract and grant administration	886	854	794	857	860
Under 35 years	73	63	54	64	62
35 - 39 years	69	72	66	68	66
40 - 44 years	103	95	76	87	83
45 - 49 years	136	115	110	124	123
50 - 54 years	186	184	167	170	171
55 - 59 years	189	177	167	185	169
60 - 64 years	91	107	110	107	132
65 years and over	39	41	44	52	54
Scientific and technical information	2,495	2,515	2,723	2,880	3,062
Under 35 years	418	372	400	435	492
35 - 39 years	448	426	431	430	407
40 - 44 years	463	440	470	516	552
45 - 49 years	427	482	542	556	595
50 - 54 years	371	395	426	458	492
55 - 59 years	243	265	298	321	334
60 - 64 years	84	93	104	116	138
65 years and over	41	42	52	48	52
Standards and specifications	961	972	932	849	937
Under 35 years	114	99	68	51	74
35 - 39 years	167	166	159	141	124
40 - 44 years	147	162	152	146	189
45 - 49 years	158	152	165	142	136
50 - 54 years	160	177	185	175	189
55 - 59 years	117	121	115	112	123
60 - 64 years	64	61	55	51	66
65 years and over	34	34	33	31	36

Table 22. White Federal scientists and engineers, by primary work activity and age: 1998-2002

Primary work activity and age	1998	1999	2000	2001	2002
Teaching and training	310	295	313	303	310
Under 35 years	17	12	19	15	17
35 - 39 years	40	40	34	23	26
40 - 44 years	51	43	42	45	41
45 - 49 years	66	57	59	55	55
50 - 54 years	71	74	77	71	56
55 - 59 years	35	42	53	56	70
60 - 64 years	15	15	19	27	33
65 years and over	15	12	10	11	12
Technical assistance and consulting	3,732	3,670	3,626	3,661	3,514
Under 35 years	407	345	289	317	286
35 - 39 years	528	495	493	433	370
40 - 44 years	588	584	560	575	557
45 - 49 years	737	703	673	676	615
50 - 54 years	723	767	800	785	765
55 - 59 years	478	483	523	548	586
60 - 64 years	193	211	197	226	228
65 years and over	78	82	91	101	107
Test and evaluation	6,719	6,345	6,548	6,679	7,034
Under 35 years	1,372	1,161	1,031	1,030	1,263
35 - 39 years	1,563	1,486	1,520	1,369	1,258
40 - 44 years	1,033	1,087	1,218	1,360	1,469
45 - 49 years	868	827	896	943	1,004
50 - 54 years	951	888	969	950	923
55 - 59 years	578	565	583	653	701
60 - 64 years	247	235	238	258	287
65 years and over	107	96	93	116	129
Other, not elsewhere classified	8,366	8,923	9,277	9,931	11,764
Under 35 years	1,721	1,700	1,674	1,842	2,265
35 - 39 years	1,590	1,710	1,692	1,648	1,835
40 - 44 years	1,373	1,515	1,648	1,856	2,201
45 - 49 years	1,231	1,361	1,397	1,551	1,895
50 - 54 years	1,302	1,410	1,547	1,517	1,619
55 - 59 years	771	814	861	1,009	1,261
60 - 64 years	269	304	343	368	496
65 years and over	109	109	115	140	192

Table 22. White Federal scientists and engineers, by primary work activity and age: 1998-2002

Primary work activity and age	1998	1999	2000	2001	2002
Activity unknown	23,346	24,868	23,663	26,215	31,952
Under 35 years	3,103	3,027	2,784	3,166	4,022
35 - 39 years	3,369	3,614	3,257	3,306	3,690
40 - 44 years	3,977	4,275	3,883	4,216	5,031
45 - 49 years	4,954	5,197	4,833	5,168	6,044
50 - 54 years	4,581	5,047	5,054	5,610	6,722
55 - 59 years	2,331	2,637	2,739	3,401	4,562
60 - 64 years	811	837	874	1,064	1,482
65 years and over	220	234	239	284	398

¹ Age was not reported for two individuals in 2002.

SOURCE: National Science Foundation tabulations from Office of Personnel Management's Central Personnel Data Files.